

INITIAL STUDY

FOR THE

RUNNING SPRINGS WATER DISTRICT
ROWCO RESERVOIRS AND BOOSTER
REPLACEMENT PROJECT

Prepared for:

Running Springs Water District
31242 Hilltop Boulevard
P.O. Box 2206
Running Springs, California 92382

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Introductory Note

During preparation of the Initial Study/Mitigated Negative Declaration (IS/MND) the District found it necessary, as part of its daily operations, to move forward with the Pump Station component of the original two component project. It did this by adopting a Categorical Exemption and filing a Notice of Exemption. Since many of the Technical Studies had already been prepared incorporating both project components, the District decided to publish the Initial Study addressing both project components. As a result of this decision, some of the sections, such as air quality and noise, over predict some potential impacts. Also, since the combined project does not result in causing any significant impacts, the more detailed substantiation herein validates the District's use of the Categorical Exemption for the pump station.

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LIST OF ABBREVIATIONS AND ACROYNMS

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
APE	Area of Potential Effect
APN	Assessor's Parcel Number
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
AWWA	American Water Works Association
BACMs	Best Available Control Measures
BMPs	Best Management Practices
BRA	Biological Resources Assessment
CAAA	Clean Air Act Amendment
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CBC	California Building Code
CCAR	California Climate Action Registry
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CIP	Capital Improvement Project
CNEL	Community Noise Equivalent Level
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DTSC	Department of Toxic and Substances Control
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
EV	electric vehicle
GCC	Global Climate Change
GHG	Greenhouse Gas
LRA	Local Responsibility Area
LST	Localized Significance Thresholds
LUST	Leaking Underground Storage Tank
MM	Mitigation Measure
NAAQS	National Ambient Air Quality Standards
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
PEIR	Program Environmental Impact Report
ROWCO	Rim of the World View Construction Company
RSWD	Running Springs Water District
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District

SCE	Southern California Edison
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SPOW	spotted owl
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCR	Tribal Cultural Resources
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VdB	vibration-velocity decibel
VHFHSZ	Very High Fire Severity Hazard Severity Zone
VMT	vehicle miles traveled
VOC	Volatile Organic Compounds
WQMP	Water Quality Management Plan

ENVIRONMENTAL CHECKLIST

1. Project Title: ROWCO Reservoirs & Booster Replacement Project
2. Lead Agency Name: Running Springs Water District
Address: 31242 Hilltop Boulevard, P.O. Box 2206
Running Springs, CA 92382
3. Contact Person: Ryan Gross, General Manager
Phone Number: (909) 867-2766
Email: rgross@runningspringswd.com
4. Background: The Running Springs Water District (RSWD or District) owns and operates water facilities that produce, treat, store, and deliver drinking water to its customers located in the unincorporated community of Running Springs, San Bernardino County, California and surrounding unincorporated areas. The District operates water production facilities, various pumping, transmission, and treatment facilities to provide water service to its customers. The District also operates a network of water pipelines, reservoirs, and pumping facilities to deliver this treated drinking water to its customers. RSWD proposes to develop a replacement reservoir at the existing ROWCO site to replace two existing small reservoirs and, also proposes to replace the existing pump station located at the site. This Initial Study describes the proposed project and evaluates the potential environmental impacts from its implementation, construction, and operation.
5. Project Location: The existing ROWCO reservoirs site is located near Old Highway 18 South between Hollymont Drive and All View Drive in the community of Running Springs. The project site encompasses approximately 87,000 square feet (sf), or about 2.0 acres. The site is located on the Keller Peak 7.5 Minute Series USGS Topographic Quadrangle Map in Section 31, Township 2 North, Range 2 West, SBBM. Specific geodetic location is Latitude 34°12'53" North, and Longitude 117°07'30 West. Figure 1 shows the regional location and Figure 2 shows site location on the USGS Keller Peak topographic map.
6. Existing Conditions: The ROWCO Reservoir site is located in the western portion of the Running Springs community as shown on Figure 2. This site encompasses one lot located within a residential community south of State Route (SR) 18. The existing onsite water infrastructure consists of two 100,000-gallon bolted steel potable water storage reservoirs, an existing 300,000-gallon welded steel potable water storage tank, and an existing 250-gallon per minute (gpm) booster/pressure reducing station (wooden enclosure) with supporting pipeline connections to the District's potable water distribution system. These facilities are located at an elevation of about 6,298 feet above mean sea level (amsl). An aerial view of the site (Figure 3) shows it is located near Outer State Highway 18 South and the site is graded with a few landscape trees shielding the view of the reservoirs from

Wild Oak Drive to the south. The site is surrounded by residences and residential lots and is located to the south of SR 18.

7. Project Sponsor Name: Running Springs Water District
Address: 31242 Hilltop Boulevard, P.O. Box 2206
Running Springs, California 92382
8. General Plan Designation: Single-Family Residential
9. Zoning: Single-Family Residential
10. Project Description

The Project consists of the installation and operation of a new 300,000-gallon welded steel, potable water storage reservoir that will replace the two existing 100,000-gallon bolted steel reservoirs, estimated to be 14 feet diameter and 20 feet height. The project also includes relocating and replacing the existing 250-gpm pump/pressure reducing station at the project site with a new 250-gpm pump/pressure reducing station in an 11-foot by 16-foot concrete block building. Figure 4 contains an illustration of the proposed location of the new 300,000-gallon steel tank that will be approximately 25-feet in height and 46-feet in diameter. The project site will be re-graded with no major change in the base elevation of about 6,298 feet amsl. About 40 cubic yards (CY) will be cut from the site and removed to a District storage location. Additionally, the portion of the existing access road located within the project site will be improved. The new welded steel tank will maintain about four feet of freeboard to protect the reservoir from sloshing impacts during an earthquake.

The proposed foundation system will be a reinforced concrete ring wall foundation system. Maximum foundation loads are anticipated at 3,500 pounds per linear foot (plf) for continuous (ring wall) foundation and up to 80 kilo-pounds (kips) for isolated pad foundations are anticipated. Associated site improvements will consist of new inlet/outlet piping, overflow and drain piping, installing water level monitoring equipment, new site pavement improvements, block walls and/or chain-link fencing as needed to control potential trespass. These activities are discussed in detail below and are depicted in the site plan provided as Figure 5, Site Plan.

The Project site presently contains the following facilities:

Physical Components

- a. Two 100,000-gallon bolted steel storage reservoirs;
- b. Piping;
- c. Pump station, pressure reducing station, and exterior wood structure;
- d. Pavement; and
- e. Electronic-control equipment.

Construction

Construction of the new replacement ROWCO Reservoir is proposed to begin in late-2024 and be completed over a 12-month period. The existing facilities will be demolished and properly recycled and disposed of. The site will be graded to final elevation and with minimal export of excess soil. The new reservoir will be a welded carbon steel storage reservoir. The pump station improvements include a concrete pad, stem wall, retaining wall and the building will be 11 feet by 16 feet constructed of concrete block. The pump station capacity of 250 gpm will not be changed.

As noted, the new tank will be designed in accordance with the latest California Building Code (CBC), the Occupational Safety and Health Administration (OSHA), American Concrete Institute (ACI), Division of the State Architect (DSA) requirements, and American Water Works Association (AWWA's) design standards. AWWA's design standards require that reservoirs be operated at the high-water level below their maximum physical height in order to prevent roof damage which may be caused by a "sloshing wave" during a seismic event.

Major land uses surrounding the project site include single-family residential.

11. Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

Before the District connects the new reservoir with the distribution system that provides water service to the local community, an amendment to District's domestic water supply permit will be required from the State Water Board Division of Drinking Water. No other permits are known to be required for this project. Because State responsible or trustee agencies have been identified for this project, the Department will implement a 30-day review period for this Initial Study and proposed Mitigated Negative Declaration. If the site is determined to host any sensitive habitat, a permit from the California Department of Fish and Wildlife (CDFW) may also be required.

12. 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?

Tribal Consultation has not been requested of the District.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|---|--|
| ☒ Aesthetics | ☐ Agriculture and 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 |

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

☐	The proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☒	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.
☐	The proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	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.
☐	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 or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Tom Dodson & Associates
Prepared by

Lead Agency (signature)

June 2024
Date

6/27/2024
Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☒	☐	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the Site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or 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?	☐	☐	☒	☐

SUBSTANTIATION

- a. *Less Than Significant Impact* – Adverse impacts to scenic vistas can occur in one of two ways. First, an area itself may contain existing scenic vistas that would be altered by new development. The proposed Site currently contains three existing reservoirs; Thus, demolition of two of these reservoirs and construction of a replacement reservoir will not substantially impact any scenic vistas within the Site itself, which is surrounded by suburban residential features, including single-family residences and paved roadways, including Outer Highway 18. The Site is located within the suburban residential portion of the unincorporated community of Running Springs. The Site itself does not contain any important scenic vistas which could be impacted by implementing the proposed new 0.30 million gallons (MG) storage reservoir. The new reservoir will be a larger reservoir, but will still be integrated into the existing disturbed site and remove the two existing reservoirs.

A scenic vista impact can also occur when a scenic vista can be viewed from the project area or immediate vicinity and a proposed development may interfere with the view to a scenic vista. The proposed reservoir will be located at an existing reservoir site where views are limited by the adjacent residences, the reservoirs and the surrounding forest. There are no major scenic views in any direction of the project area due to the existing facilities and trees. Therefore, given that the replacement reservoir at this location would be located in the same site as the existing reservoirs, the installation of a replacement reservoir at this location is not anticipated to substantially impact scenic vistas to residents or visitors within the project area. Thus, implementation of the proposed new reservoir is not expected to cause any substantial adverse effects on any important scenic vistas. This potential impact is considered a less than significant adverse aesthetic impact. No mitigation is required.

- b. *Less Than Significant With Mitigated Incorporated* – The proposed Project Site currently hosts existing reservoirs, and therefore the construction of a replacement reservoir at this location is consistent with the existing use of the Site. There are several trees on the project site and the installation of a larger reservoir will require removal of some trees in order to install the proposed replacement reservoir. Given that the proposed Project will require removal of some onsite trees, however, removal of trees at this Site would result in an adverse impact. Mitigation is provided below to ensure that the District provides replacement trees for all trees removed as part of the project.

AES-1 Where the removal of trees is required to install the new reservoir, the District shall replace all trees removed at a 1:1 ratio.

Rock outcroppings, historic buildings, or other scenic resources do not occur on Site, especially given that the Site is occupied by existing reservoirs and water system support facilities, including the existing pump station. Consequently, impacts to scenic resources on Site are considered less than significant with the implementation of mitigation measure (MM) **AES-1**.

- c. ***Less Than Significant Impact*** – The proposed Project Site is located in a suburban area surrounded by single-family residences and local roads. Refer to Figure 3, site aerial photograph. The Site has a limited range in elevation and consists of the existing reservoirs, of limited trees and vegetation, as well as the existing paved access roads that surround the existing reservoir Site. The Site is located in an area that contains existing water facilities and the construction of the new reservoir would be visually consistent with the existing visual landscape at the Site. As such, the height of the new reservoir would not create a substantially greater visual footprint than that which presently exists with two smaller reservoirs. Furthermore, the proposed Project is an infrastructure project, and such projects as the proposed replacement reservoir and pump station are considered land use/zone independent. Therefore, the proposed installation of a larger replacement reservoir and associated Site improvements would not have a significant potential to conflict with applicable zoning or other regulations governing scenic quality. Impacts under this issue are considered less than significant, and no mitigation is required.
- d. ***Less Than Significant Impact*** – The existing reservoir currently utilizes night lighting for security purposes. New lighting intended for security, and to enable night-time operations and maintenance activities as required in the future, can be installed now to better minimize light and glare on adjacent residences. The construction activities are limited to daylight hours unless an emergency occurs, and the amount of security lighting needed during construction will be limited. Therefore, given that the proposed Project would not create a new permanent source of light, the proposed Project is not anticipated to introduce a significant new source of light and glare into the project area relative to the existing Site. No significant new impacts are anticipated to occur under this issue and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. 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 Dept. 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:				
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?	☐	☐	☒	☐

SUBSTANTIATION

- a. *No Impact* – The proposed project will be developed within an area consisting of native Western pine habitat, and the project area does not contain any agricultural uses. Neither the project footprint nor the surrounding area are designated for agricultural use; no agricultural activities exist in the project area; and there is no potential for impact to any agricultural uses or values as a result of project implementation. According to the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, no prime farmland, unique farmland, or farmland of state importance exists within the vicinity of the proposed project (Figure II-1). No adverse impact to any agricultural resources would occur from implementing the proposed project. No mitigation is required.
- b. *No Impact* – There are no agricultural uses currently within the boundaries of the project site or adjacent to the project site. The project site is zoned low density residential in unincorporated

(County) Running Springs. Therefore, no potential exists for a conflict between the proposed project and agricultural zoning or Williamson Act contracts within the project area. No mitigation is required.

- c. *Less Than Significant Impact* – The proposed project is located on a site that already functions as a water supply facility for the Running Springs Water District. The site does contain trees, but due to the existing disturbance and use of the site, the proposed project will not “convert” the site from use as a timber harvest area. Further, the County has not designated the site for timberland resource use. Therefore, the continued use of this site for water infrastructure purposes is not forecast to have a significant adverse impact on timber/timberland resources. No mitigation is required.
- d. *Less Than Significant Impact* – Please refer to the discussion under issue II(c), above. The proposed project is located on a site that was historically removed from functioning as forest land and although this water infrastructure site contains a few trees of varying sizes, its continued use for water infrastructure will not result in loss or conversion of forest land to alternative uses. Impacts under this issue are considered less than significant.
- e. *Less Than Significant Impact* – The project site and surrounding area are designated for low density residential use and do not support agricultural or forest uses that have been designated by the County. However, as stated above, while the County has not designated the site for timberland or forest resource uses, the land use at the site will not change. Given the above, the proposed project would have a less than significant potential to 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.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

SUBSTANTIATION: The following information utilized in this section was obtained from the technical study "Running Springs Water District Air Quality & Greenhouse Gas Assessment" prepared by Urban Crossroads dated June 18, 2024. This document is provided as Appendix 1 of this Initial Study.

Background

Climate

The project area is in the San Bernardino Mountains. The area is characterized by an alpine climate, with substantial winter precipitation in the form of winter snow because of its elevation. Snowfall, as measured at lake level, averages 61.8 inches each year (although upwards of 100 inches can accumulate on the forested ridges bordering the lake, above 8,000 feet). Snow has fallen in every month except July and August. There are normally 16.5 days each year with measurable snow (0.1 inch or more).

On average, the Bear Valley area receives approximately 24 inches of precipitation per year, with a sharp transition between the western edge of the Valley at the dam and the eastern edge at Baldwin Lake. Historical precipitation consists of both rainfall and snowfall. Within the Big Bear watershed, the precipitation varies with location. At the dam, Big Bear Lake receives about 36 inches of precipitation per year, and about 14 inches at the east end of the Valley.

Daily minimum temperatures in the summer are from 60°F to 70°F. Temperatures in the winter average approximately 35°F to 40°F. According to the National Weather Service, the warmest month at Big Bear is July, when the average high is 80.7 F and the average low is 47.1F. The coolest month is January, with an average high of 47.1°F and an average low of 20.7°F. There is an average of 1.2 days each year with highs of 90°F or higher. The highest temperature recorded at Big Bear was 94°F last recorded on July 15, 1998. The record lowest temperature was -25°F on January 29, 1979.

Air Quality Standards

Existing air quality is measured at established Southern California Air Quality Management District (SCAQMD) air quality monitoring stations. Monitored air quality is evaluated and in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table III-1. Because the State of California had established Ambient Air Quality Standards (AAQS) several years

before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table III-1. Sources and health effects of various pollutants are shown in Table III-2.

**Table III-1
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O3) ⁸	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10) ⁹	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter (PM2.5) ⁹	24 Hour	–	–	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15.0 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9 ppm (10 mg/m³)		9 ppm (10 mg/m³)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO2) ¹⁰	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO2) ¹¹	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	–	Ultraviolet Flourescence; Spectrophotometry (Paraosaniline Method)
	3 Hour	–		–	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas) ¹¹	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ¹¹	–	
Lead 8 ^{12,13}	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 µg/m³ (for certain areas) ¹²	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Avg	–		0.15 µg/m³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: California Air Resources Board 5/4/16

Footnotes:

- 1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- 2 National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year, with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$, is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
- 3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- 4 Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
- 5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- 6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- 7 Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
- 8 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- 9 On December 14, 2012, the national PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- 10 To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- 11 On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- 12 The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- 13 The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- 14 In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

**Table III-2
HEALTH EFFECTS OF MAJOR CRITERIA POLLUTANTS**

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	- Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. - Natural events, such as decomposition of organic matter.	- Reduced tolerance for exercise. - Impairment of mental function. - Impairment of fetal development. - Death at high levels of exposure. - Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	- Motor vehicle exhaust. - High temperature stationary combustion. - Atmospheric reactions.	- Aggravation of respiratory illness. - Reduced visibility. - Reduced plant growth. - Formation of acid rain.
Ozone (O ₃)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	- Aggravation of respiratory and cardiovascular diseases. - Irritation of eyes. - Impairment of cardiopulmonary function. - Plant leaf injury.
Lead (Pb)	Contaminated soil.	- Impairment of blood function and nerve construction. - Behavioral and hearing problems in children.
Fine Particulate Matter (PM-10)	- Stationary combustion of solid fuels. - Construction activities. - Industrial processes. - Atmospheric chemical reactions.	- Reduced lung function. - Aggravation of the effects of gaseous pollutants. - Aggravation of respiratory and cardio respiratory diseases. - Increased cough and chest discomfort. - Soiling. - Reduced visibility.
Fine Particulate Matter (PM-2.5)	- Fuel combustion in motor vehicles, equipment, and industrial sources. - Residential and agricultural burning. - Industrial processes. - Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics.	- Increases respiratory disease. - Lung damage. - Cancer and premature death. - Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO ₂)	- Combustion of sulfur-containing fossil fuels. - Smelting of sulfur-bearing metal ores. - Industrial processes.	- Aggravation of respiratory diseases (asthma, emphysema). - Reduced lung function. - Irritation of eyes. - Reduced visibility. - Plant injury. - Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002

Baseline Air Quality

Existing and probable future levels of air quality in the project area can be best inferred from ambient air quality measurements conducted by the SCAQMD. The data resource in closest proximity to the project site is the Big Bear City Monitoring Station. However, this station only monitors small particulates (PM-2.5). The closest available data for ozone and large particulates (PM-10) is the Crestline Monitoring Station. Data for carbon monoxide and nitrogen oxide were obtained from the San Bernardino 4th Street Monitoring Station. Summary data compiled from these resources is provided in Table III-3. Findings are summarized below.

Photochemical smog (ozone) levels frequently exceed ozone standards at Crestline. The 8-hour state ozone standard has been exceeded an average of 30 percent of all days in the past four years near the

project site while the 1-hour state standard has been violated an average of 17 percent of all days. While ozone levels are still high, they are much lower than 10 to 20 years ago.

Measurements of carbon monoxide have shown very low baseline levels in comparison to the most stringent one- and eight-hour standards.

Respirable dust (PM-10) levels very rarely exceed the state or federal standard PM-10 standard. There have only been four violations in the last four years of measurement days for state PM-10. A substantial fraction of PM-10 is comprised of small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). However, PM-2.5 readings rarely exceed the federal 24-hour PM-2.5 ambient standard and there have had no violations within the previous four years.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table III-3
AIR QUALITY MONITORING SUMMARY (2018-2021)
(Number of Days Standards Were Exceeded, and
Maximum Levels During Such Violations)
(Entries shown as ratios = samples exceeding standard/samples taken)

Pollutant/Standard	2018	2019	2020	2021
Ozone				
1-Hour > 0.09 ppm (S)	57	53	69	65
8-Hour > 0.07 ppm (S)	113	99	118	110
8- Hour > 0.075 ppm (F)	91	79	97	91
Max. 1-Hour Conc. (ppm)	0.142	0.129	0.159	0.148
Max. 8-Hour Conc. (ppm)	0.125	0.112	0.139	0.120
Carbon Monoxide				
8- Hour > 9. ppm (S,F)	0	0	0	0
Max 8-hour Conc. (ppm)	2.0	1.2	1.4	1.6
Nitrogen Dioxide				
1-Hour > 0.18 ppm (S)	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.055	0.056	0.054	0.050
Respirable Particulates (PM-10)				
24-hour > 50 µg/m ³ (S)	1/59	0/54	1/40	0/59
24-hour > 150 µg/m ³ (F)	0/59	0/54	0/40	0/59
Max. 24-Hr. Conc. (µg/m ³)	78.	38.	51.	33.
Fine Particulates (PM-2.5)				
24-Hour > 35 µg/m ³ (F)	0/54	0/46	0/58	0/59
Max. 24-Hr. Conc. (µg/m ³)	17.3	31.0	24.3	24.5

Source: South Coast Air Quality Management District;
Crestline Monitoring Station for Ozone and PM-10.
San Bernardino 4th Street Monitoring Station for CO and NO₂.
Big Bear City Monitoring Station for PM-2.5.
data: WWW.ARB.CA.GOV/ADAM/

Air Quality Planning

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with “serious” or worse ozone problems submit a revision to the State Implementation Plan (SIP). Substantial reductions in emissions of ROG, NOx and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air “blueprint” in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was to “slip” from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because projected attainment by 2021 required control technologies that did not exist yet, the SCAQMD requested a voluntary “bump-up” from a “severe non-attainment” area to an “extreme non-attainment” designation for ozone. The extreme designation was to allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on “black-box” measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from “severe-17” to “extreme.” This reclassification set a later attainment deadline (2024), but also required the air basin to adopt even more stringent emissions controls.

In other air quality attainment plan reviews, EPA had disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA stated that the current attainment plan relied on PM-2.5 control regulations that had not yet been approved or implemented. It was expected that several rules that were pending approval would remove the identified deficiencies. If these issues were not resolved within the next several years, federal funding sanctions for transportation projects could result. The 2012 AQMP included in the current California State Implementation Plan (SIP) was expected to remedy identified PM-2.5 planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal one-hour ozone standard even though that standard was revoked almost ten years ago. There was no approved attainment plan for the one-hour federal standard at the time of revocation. Through a legal quirk, the SCAQMD is now required to develop an AQMP for the long since revoked one-hour federal ozone standard. Because the current SIP for the basin contains a number of control measures for the 8-hour ozone standard that are equally effective for one-hour levels, the 2012 AQMP was believed to satisfy hourly attainment planning requirements.

AQMPs are required to be updated at regular intervals. The 2012 AQMP was adopted in early 2013. An updated 2016 AQMP was adopted by the SCAQMD Board in March 2017. The 2016 AQMD demonstrated the emissions reductions shown in Table III-4 compared to the 2012 AQMP.

Table III-4
COMPARISON OF EMISSIONS BY MAJOR SOURCE CATEGORY FROM 2012 AQMP

Pollutant	Stationary Sources	Mobile Sources
VOC	-12%	-3%
NOx	-13%	-1%
SOx	-34%	-23%
PM2.5	-9%	-7%

*source 2016 AQMP

SCAQMD has initiated the development of the 2022 AQMP to address the attainment of the 2015 8-hour ozone standard (70 ppb) for South Coast Air Basin and Coachella Valley which will focus on attaining the 70 ppb 8-hour ozone National Ambient Air Quality Standard (NAAQS) by 2037. On-road vehicles and off-road mobile sources represent the largest categories of NOx emissions. Accomplishment of attainment goals requires an approximate 70% reduction in NOx emissions. Large scale transition to zero emission technologies is a key strategy. To this end, Governor Newsom's Executive Order N-79-20 requires 100 percent EV sales by 2035 for automobiles and short haul drayage trucks. A full transition to EV buses and heavy-duty long-haul trucks is required by 2045.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing water infrastructure projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

Standards of Significance

Appendix G of the California CEQA Guidelines offers the following four tests of air quality impact significance. A project would have a potentially significant impact if it:

- a. Conflicts with or obstructs implementation of the applicable air quality plan.
- b. Results in a cumulatively considerable net increase of any criteria pollutants for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- c. Exposes sensitive receptors to substantial pollutant concentrations.
- d. Results in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any emission thresholds in Table III-5 are recommended by the SCAQMD to be considered significant under CEQA guidelines.

**Table III-5
DAILY EMISSIONS THRESHOLDS**

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
Sox	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Additional Indicators

The SCAQMD CEQA Handbook identifies various secondary significance criteria related to toxic, hazardous or odorous air contaminants. Such pollutants may be associated with demolition of existing structures if they contain asbestos, lead-based paint, or other hazardous building materials. Prior to demolition detailed surveys will be conducted to ascertain the possible presence of asbestos, lead-based paint, etc. If any such materials are present, they will be remediated using mandatory procedures specified by Rule 1403-Asbestos Emissions from Demolition and Renovation Activities SCAQMD and state air toxics agencies. The surveys for asbestos and lead will be required by the District, therefore no mitigation is needed to address this issue.

Impact Analysis

- a. *Less Than Significant Impact* – Projects such as the proposed development of a new 0.30 MG water storage reservoir and pump station do not directly relate to the AQMP in that there are no specific air quality programs or regulations governing general infrastructure development. This makes sense since, once installed, reservoirs do not generate new emissions. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use are the primary yardsticks by which impact significance of planned growth is determined. Based on the analysis of the County's General Plan Land Use Element, the proposed Project is consistent with the adopted General Plan. Furthermore, water production facilities are zone and land use independent because they are needed to support all types of development. Thus, the proposed Project is consistent with regional planning forecasts maintained by SCAG regional plans. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less than significant only because of consistency with regional growth projections. Air quality impact significance for the proposed Project has therefore been analyzed on a project-specific basis. As the analysis of project-related emissions provided below indicates, the proposed Project will not cause or be exposed to significant air pollution, and is, therefore, consistent with the applicable air quality plan. Consistent with the AQMP, mitigation measures will be implemented to minimize fugitive dust and ozone precursor emissions.
- b. *Less Than Significant With Mitigation Incorporated* – Air pollution emissions associated with the proposed Project would occur over both a short and long-term time period. Short-term emissions include fugitive dust from construction activities (i.e., site prep, demolition, grading and exhaust emissions, and reservoir installation emissions) at the site. Long-term emissions generated by future operation of the proposed reservoir are negligible as minimal additional energy is anticipated to be required to support the new reservoir. Note that the District has not yet determined whether it will install a backup generator in conjunction with the new pump station, which will be operated using electric power. If an emergency backup generator is installed, the District will contact SCAQMD and

process a new permit with the District. Under this circumstance the SCAQMD would become a CEQA Responsible Agency.

Construction Emissions

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

The project site encompasses approximately 2 acres. The project entails several components. First, the two existing small reservoirs will be demolished and will be replaced by a new 300,000-gallon water storage reservoir tank. Second, the project includes replacing the existing pump station at the project site with a new pump station that will include a concrete block building and a metal roof. Finally new piping will be required to provide supporting pipeline connections to the existing potable water distribution system. Construction is anticipated to start in late-2024 and take approximately 12 months, but for ease of calculations it was assumed all construction would occur in year 2024. Existing facilities will be demolished and properly disposed of. The site will be graded and approximately 40 cy of soil will be removed to achieve the proper reservoir elevation.

Construction was modeled in CalEEMod2020.4.0 using the following construction equipment and schedule shown in Table III-6.

**Table III-6
RESERVOIR CONSTRUCTION ACTIVITY EQUIPMENT FLEET**

Phase Name and Duration	Equipment
Demolition (1 month)	1 Concrete Saw
	1 Drain Pump
	1 Dozer
	2 Loader/Backhoes
Grading (2 weeks) 2,000 CY earthworks export	1 Dozer
	1 Excavator
	1 Grader
New Tank Construction (10 months)	1 Crane/Hoe Ram
	2 Concrete Pumps
	2 Loader/Backhoes
	1 Generator Set
	2 Welders
	1 Stress Tower
Piping (1 month)	2 Trenchers
	2 Forklifts
	1 Welder

PUMP STATION DEMO AND CONSTRUCTION

Phase Name and Duration	Equipment
Excavation/Demo 3 weeks	1 Forklift
	1 Masonry Saw
	2 Loader/Backhoes
Building Construction 5 weeks	1 Mixer
	1 Pump
	2 Air Compressors
Equipping and Piping 5 weeks	1 Crane
	1 Loader/Backhoe
	1 Forklift
	1 Welder

Utilizing this indicated equipment fleet and durations shown in Table III-6, the following worst-case daily construction emissions are calculated by CalEEMod and are listed in Table III-7.

Table III-7
REGIONAL CONSTRUCTION ACTIVITY EMISSIONS
MAXIMUM DAILY EMISSIONS (pounds/day)

Source	Emissions (lbs./day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer						
2025	2.26	15.62	19.75	0.03	0.78	0.61
Winter						
2024	2.15	19.55	17.75	0.02	3.34	1.95
2025	2.26	15.62	19.51	0.03	0.78	0.61
Maximum Daily Emissions	2.26	19.55	19.75	0.03	3.34	1.95
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

¹PM₁₀ and PM_{2.5} source emissions reflect 3x daily watering per SCAQMD Rule 403 for fugitive dust.

As shown in Table III-7, peak daily emissions would be substantially less than their respective significance thresholds. Detailed model outputs for the backup diesel generator emissions calculations are presented in Attachment A of Appendix 1.

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure. If asbestos or lead paint are discovered at the site, removal and disposal will follow existing SCAQMD regulations for these toxic materials.

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, emissions minimization through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin and proximity of residential uses. Recommended measures include:

AQ-1 Fugitive Dust Construction

- **Apply soil stabilizers or moisten inactive areas.**
- **Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).**
- **Cover all stock piles with tarps at the end of each day or as needed.**
- **Provide water spray during loading and unloading of earthen materials.**
- **Minimize in-out traffic from construction zone**
- **Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard**
- **Sweep streets daily if visible soil material is carried out from the construction site**

Similarly, ozone precursor emissions (ROG and NOx) are calculated to be below SCAQMD CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Combustion emissions control options include:

AQ-2 Exhaust Emissions Control

- **Utilize well-tuned off-road construction equipment.**
- **Establish a preference for contractors using Tier 3 or better rated heavy equipment.**
- **Enforce 5-minute idling limits for both on-road trucks and off-road equipment.**

With implementation of these two measures, project-related construction emissions will be minimized consistent with SCAQMD requirements.

Operational Emissions

Long-term air quality impacts occur from mobile source emission generated from Project-related traffic and from stationary source emissions generated from natural gas. The proposed Project primarily involves construction activity. For on-going operations, mobile emissions would be generated by the motor vehicles traveling to and from the Project sites during on-going maintenance. However, the project would generate a nominal number of traffic trips for periodic maintenance and inspections. All operational equipment associated with the Project would be electrically powered and would not directly generate air emissions. It is our understanding that the proposed Project will include the use of a 350-horsepower pump.

Stationary area source emissions are typically generated by the consumption of natural gas for space and water heating devices and the use of consumer products. Stationary energy emissions would result from energy consumption associated with the proposed Project. However, the proposed Project may include the use of an emergency diesel generator supplying power to the treatment plant in case of emergency. If a backup generator were installed, the lead agency would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources to reduce air pollution, and to attain and maintain NAAQS and CAAQS within the SCAB. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment. A backup generator would be used only in emergency situations and for routine testing and maintenance purposes. Based on guidance from SCAQMD, the backup generator would operate for a maximum of 200 hours annually or approximately 0.5 hours per day. Emissions associated with the backup generator are summarized on Table III-8, as shown, emissions from the backup generator would not contribute a substantial amount of emissions capable of exceeding SCAQMD thresholds.

As Project operations would not exceed SCAQMD thresholds, the Project would not violate an air quality standard or contribute to an existing violation. Therefore, Project operations would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be less than significant. Detailed model outputs for the backup diesel generator emissions calculations are presented in Attachment A of Appendix 1.

Project operational-source emissions would not exceed the numerical thresholds of significance established by the SCAQMD for any criteria pollutant, a less than significant impact would occur for Project-related operational-source emissions and no mitigation is required. Finally, the volume of water pumped to the new reservoir will not be increased to the site as the proposed project will not alter the volume of water consumed, only the volume of water stored at the site to support existing water demand.

**Table III-8
TOTAL PROJECT REGIONAL OPERATIONAL EMISSIONS**

Source	Emissions (lbs./day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer						
Stationary Source	0.01	0.03	0.04	0.00	0.00	0.00
Total Maximum Daily Emissions	0.02	0.03	0.04	0.00	0.00	0.00
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

- c. *Less Than Significant Impact* – The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed Project, the primary source of possible LST impact would occur during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours, such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LST screening tables are available for 25, 50-, 100-, 200- and 500-meter source-receptor distances. Major land use surrounding the site is: single-family residential. Refer to Appendix 1 for a discussion of the nearest receptors.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1-, 2- and 5-acre sites for varying distances. For this project, the most stringent thresholds for a 1-acre site were applied.

The following thresholds and emissions in Table III-9 are therefore determined (pounds per day):

**Table III-9
PROJECT LOCALIZED CONSTRUCTION IMPACTS**

On-Site Emissions	Emissions (lbs./day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Demolition				
Maximum Daily Emissions	15.58	16.03	0.69	0.62
SCAQMD Localized Threshold	118	667	4	3
Threshold Exceeded?	NO	NO	NO	NO

On-Site Emissions	Emissions (lbs./day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Site Preparation				
Maximum Daily Emissions	16.62	14.58	2.85	1.70
SCAQMD Localized Threshold	144	820	6	4
Threshold Exceeded?	NO	NO	NO	NO
Grading				
Maximum Daily Emissions	19.46	17.09	3.20	1.92
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	NO	NO	NO	NO
Building Construction				
Maximum Daily Emissions	10.94	11.63	0.44	0.40
SCAQMD Localized Threshold	118	667	4	3
Threshold Exceeded?	NO	NO	NO	NO
Paving				
Maximum Daily Emissions	5.24	7.22	0.23	0.21
SCAQMD Localized Threshold	118	667	4	3
Threshold Exceeded?	NO	NO	NO	NO

LSTs were compared to the maximum daily construction activities. As seen in Table III-9, with active dust suppression, emissions meet the LST for construction thresholds. LST impacts are less-than-significant.

No other project-related emissions are forecast that could exposed sensitive receptors to substantial pollutant concentrations.

- d. *Less Than Significant Impact* – Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The proposed Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. The proposed Project's operations (pumping and storage) are an essentially closed system with negligible odor potential. Odors will be briefly detectable during application of the interior epoxy coating and outdoor paint application on the reservoir shell during construction. Good painting practice (low wind speeds, high efficiency sprayers, and full plastic containment) will minimize odor or overspray and paint transport. Furthermore, the proposed Project would be required to comply with SCAQMD Rule 1113, which requires the use of only "Low-Volatile Organic Compounds (VOC)" paints. Thus, through the required compliance with SCAQMD Rule 1113, impacts under this issue are considered less than significant. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, 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?	☐	☐	☐	☒

SUBSTANTIATION: The following information utilized in this section was obtained from the technical study “Biological Resources Assessment for the Running Springs Water District Hollymount Reservoir Project, in the Unincorporated Town of Running Springs, San Bernardino County, California” prepared by Jennings Environmental dated August 11, 2023, and provided as Appendix 2 to this document.

- a. *Less Than Significant Impact* – A Biological Resources Assessment-for the project site was conducted by Jennings Environmental in August 2023 to identify potential habitat for special status plant and wildlife species within the Project Area. No special status species, including any state and/or federally listed threatened or endangered species, were observed within the Project Area during the reconnaissance-level assessment survey, which included 100% visual coverage of the Project site. The Project Area does not contain any sensitive habitats, including any USFWS designated Critical Habitat for federally listed species, and the Project will not result in any loss or adverse modification of Critical Habitat. Based on the findings of the field survey, the proposed project impact on sensitive species and habitat is forecast to be less than significant. No mitigation is required.
- b. *No Impact* – Based on the site survey, the project site does not contain riparian habitat or any other sensitive natural community/habitat. Therefore, the proposed project has no potential to adversely impact such habitat. No mitigation is required.

- c. *No Impact* – Based on the site survey, the project site does not contain wetlands, including protected wetlands. Therefore, the proposed project has no potential to adversely impact such habitat. No mitigation is required.
- d. *Less Than Significant With Mitigation Incorporated* – The project site is small and is not identified as functioning as a wildlife movement corridor. However, the project site may support nesting birds during nesting season and the following mitigation measures shall be implemented to reduce potential impacts to nests functioning as bird nurseries.

BIO-1 *Vegetation removal, including any tree removal or pruning, and structure demolitions should be conducted outside of the typical bird nesting season (between September 1st and February 1st. Otherwise, to avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist should conduct pre construction nesting bird surveys prior to Project related disturbance to suitable nesting areas to identify any active nests. The nesting bird surveys should consist of a minimum of five (5) consecutive survey days and should include an additional three (3) consecutive nights of survey for SPOW and other nocturnal species. Nocturnal spotted owl surveys should be conducted between the hours of 9:00 pm. and midnight, during appropriate weather conditions (e.g., no rain or winds), and should include a spot calling survey component that would utilize California spotted owl call playback at predetermined fixed calling points.*

BIO-2 *If no active nests are found, no further action would be required. If an active nest is found, the biologist should set appropriate no work buffers around the nest which would be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity, and duration of disturbance. The nest(s) and buffer zones should be field checked weekly by a qualified biological monitor. The approved no work buffer zone should be clearly marked in the field, within which no disturbance activity should commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.*

With implementation of these measures potentially significant impacts to the species of concern can be reduced to a less than significant impact.

- e. *Less Than Significant Impact* – The Reservoir project site does contain a few trees that may either be removed or pruned. The number of trees on the site that may be affected is limited and no significant conflict with local policies or ordinances is forecast to occur. No mitigation is required.
- f. *No Impact* – Based on the BRA for the proposed project, there are no conservation plans that affect the project site. Therefore, the proposed project has no potential to adversely impact or conflict with such plans. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

SUBSTANTIATION: The information provided below is abstracted from a cultural resources technical study: "Historical/Archaeological Resources Survey Report, ROWCO Reservoirs and Booster Pump Replacement Project, Assessor's Parcel Numbers 0328-201-05 and -06, Running Springs Area, San Bernardino County, California," CRM TECH, June 9, 2024. This document is provided as Appendix 3 to this Initial Study.

Background

Between February and June 2024, at the request of Tom Dodson & Associates, CRM TECH performed a cultural resources survey for the proposed ROWCO Reservoirs and Booster Replacement Project in the unincorporated Running Springs area of San Bernardino County, California. The subject property of the survey consists of Assessor's Parcel Numbers 0328- 201-05 and -06, totaling approximately two acres. It is located on the south side of Outer Highway 18 South between Hollymont Drive and All View Drive, in the southeast quarter of Section 31, Township 2 North, Range 2 West, San Bernardino Baseline and Meridian, as depicted in the United States Geological Survey Keller Peak, California, 7.5' quadrangle.

The study is part of the environmental review process for the proposed project, which entails primarily the replacement of two existing 100,000-gallon bolted steel reservoirs with one new 300,000-gallon welded steel potable water storage reservoir. The project also includes the replacement and relocation of a pump/pressure reducing station into an 11x16-foot concrete block building and the installation of the necessary piping, pavement, and electric-control equipment. The Running Springs Water District (RSWD), as the lead agency for the project, required the study in compliance with the California Environmental Quality Act (CEQA).

The purpose of this study is to provide RSWD with the necessary information and analysis to determine whether the proposed project would cause substantial adverse changes to any "historical resources," as defined by CEQA, that may exist in or around the project area. In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, initiated a Native American Sacred Lands File search, pursued historical background research, and carried out an intensive-level field survey. As a result of these research procedures, the three existing reservoir tanks at the project site, originally constructed in the 1950s-1970s, and associated features were recorded into the California Historical Resources Inventory and designated temporarily as Site 4103-1H, pending the assignment of a permanent identification number.

As a common water storage facility that does not demonstrate a close association with any persons or events of recognized significance, special merits in design, construction, or aesthetics, or the potential for important historical/archaeological data, Site 4103-1H does not appear eligible for listing in the California Register of Historical Resources and thus does not meet CEQA's definition of a "historical resource." No

other potential "historical resources" were encountered within the project area throughout the course of this study.

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a&b. *Less Than Significant With Mitigation Incorporated* – CEQA establishes that "a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (PRC §21084.1). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

Per the above discussion and definition, no historical or archaeological sites or isolates were recorded within the project boundaries that meet the test of being significant; thus, none of them requires further consideration during this study. In light of this information and pursuant to PRC §21084.1, the following conclusions have been reached for the project:

- No historical resources or archaeological resources within or adjacent to the project area have any potential to be disturbed as they are not within the proposed area in which the facilities will be constructed and developed, and thus, the project as it is currently proposed will not cause a substantial adverse change to any known historical resources.
- No further cultural resources investigation is necessary for the proposed project unless construction plans undergo such changes as to include areas not covered by this study.

However, since demolition and earth moving activities are required, the following mitigation measure will ensure that impacts to any buried cultural materials that may be discovered during earth moving activities is less than significant:

CUL-1 In the event that cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and an archaeologist meeting the Secretary of Interior's professional qualification standards in archaeology shall be retained to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period.

- c. *Less Than Significant Impact* – As noted in the discussion above, no available information suggests that human remains may occur within the Area of Potential Effect (APE) and the potential for such an occurrence is considered very low. Human remains discovered during the project will need to be treated in accordance with the provisions of HSC §7050.5 and PRC §5097.98, which is mandatory. State law (Section 7050.5 of the Health and Safety Code) as well as local laws requires that the Police Department, County Sheriff and Coroner's Office receive notification if human remains are encountered. Compliance with these laws is considered adequate mitigation for potential impacts, and as such the potential for impact to discovery and treatment of human remains would be less than significant level.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. ENERGY: Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations?	☐	☒	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☒	☐	☐

SUBSTANTIATION

- a. *Less Than Significant With Mitigation Incorporated* – During construction, the proposed project will utilize construction equipment that is CARB approved, minimizing emissions generated, and electricity required to the extent feasible (as outlined under Section III, Air Quality, above). As stated in Section III, Air Quality, the construction of the proposed ROWCO Reservoir and Pump Station Project would require mitigation measures to minimize air emissions impacts from construction equipment use (refer to MM **AQ-2**) consistent with SCAQMD objectives. These mitigation measures also apply to energy resources as they require equipment not in use for 5 minutes to be turned off, and for electrical construction equipment to be used where available. These measures would prevent a significant impact during construction due to wasteful, inefficient, or unnecessary consumption of energy resources, and would also conform to the CARB regulations regarding energy efficiency.

The proposed project consists of the demolition and removal of two existing small reservoirs, installation of a larger single replacement reservoir and replacement of a pump station at the existing ROWCO Reservoir site in the unincorporated community of Running Springs. Energy consumption encompasses many different activities. For example, construction can include the following activities: delivery of equipment and material to a site from some location (note it also requires energy to manufacture the equipment and material); employee trips to work, possibly offsite for lunch (or a visit by a catering truck); travel home, and occasionally leaving a site for an appointment or checking another job; use of equipment onsite (electric or fuel); and as in this case demolition and disposal of construction waste. To minimize energy costs of construction debris management, mitigation has been established to require diversion of all material capable of being recycled for re-use. Energy consumption by equipment will be reduced by requiring shutdowns when equipment is not in use after five minutes and ensuring equipment is being operated within proper operating parameters (tune-ups) to minimize emissions and fuel consumption. These requirements are consistent with State and regional rules and regulations. Under the construction scenario outlined above, the proposed project will not result in wasteful, inefficient, or unnecessary energy consumption during construction.

The proposed project site is supplied electricity by Southern California Edison (SCE) through the power distribution system located adjacent to the reservoir site. SCE will be able to supply sufficient electricity, as the proposed use will use electricity for transport of water and limited security lighting only. The project site will not require natural gas to operate. Although the new reservoir will be larger, and will result in storage of more water onsite, the proposed project will not result in increased demand for potable water within the District, other than the initial filling of the new reservoir. Compliance with regulatory requirements for operational energy use and construction energy use would not be considered a wasteful or unnecessary use of energy. Under both the operational and construction scenarios for the proposed project, with implementation of MM **AQ-2**, the proposed project will not result in wasteful, inefficient, or unnecessary energy consumption that could result in a significant adverse impact to energy issues based on compliance with the State laws, regulations and guidelines.

- b. Less Than Significant Impact - The Project's consistency with the applicable state and local plans is discussed below.

Consistency with Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

Transportation and access to the project site is provided by the local and regional roadway systems, specifically State Route 18 (SR 18). The proposed project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because Southern California Association of Governments is not planning for intermodal facilities on, through or in the vicinity of the project site.

Consistency with the Transportation Equity Act for the 21st Century (TEA-21)

The project site is located near a major transportation corridor in the San Bernardino Mountains with proximate access to the state highway system (SR 18 is located near the project site). The project site facilitates access acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through collocation of similar uses. The proposed project supports the strong planning processes emphasized under TEA-21. The proposed project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21.

Consistency with Integrated Energy Policy Report (IEPR)

Electricity would be provided to the project site by SCE. SCE's Clean Power and Electrification Pathway white paper builds on existing state programs and policies. As such, the proposed project is consistent with, and would not otherwise interfere with, nor obstruct implementation of the goals presented in the 2020 IEPR.

Consistency with State of California Energy Plan

The project site is located proximate to transportation corridors with access to the State highway system. The project site access takes advantage of existing infrastructure systems, including proximate electricity distribution system. The proposed project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan.

Consistency with California Code Title 24, Part 6, Energy Efficiency Standards

The 2022 version of Title 24 was adopted by the California Energy Commission (CEC) and became effective on January 1, 2022. It should be noted that the analysis herein assumes compliance with the 2022 Title 24 Standards.

Consistency with AB 1493 (Pavley Regulations and Fuel Efficiency Standards)

AB 1493 is not applicable to the proposed project as it is a statewide measure establishing vehicle emissions standards. No feature of the proposed project would interfere with implementation of the requirements under AB 1493.

Consistency with California's Renewable Portfolio Standard (RPS)

California's Renewable Portfolio Standard is not applicable to the proposed project as it is a statewide measure that establishes a renewable energy mix. No feature of the proposed project would interfere with implementation of the requirements under RPS.

Consistency with the Clean Energy and Pollution Reduction Act of 2015 (SB 350)

The proposed project would use energy from SCE, which has committed to diversify its portfolio of energy sources by increasing energy from wind and solar sources. No feature of the proposed project would interfere with implementation of SB 350. Additionally, the proposed project would be designed and constructed to implement the energy efficiency measures for new infrastructure developments and would include several measures designed to reduce energy consumption.

Conclusion

As shown above, the proposed project would not conflict with any of the state or local plans. As such, the proposed project would have a less than significant potential to conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GEOLOGY AND SOILS: 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 ground shaking?	☐	☐	☒	☐
(iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
(iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

SUBSTANTIATION

a. i. Ground Rupture

Less Than Significant Impact – The project site is located within the community of Running Springs within the Mountain Region of the County of San Bernardino to the southeast of Lake Arrowhead. California as a whole is a seismically active state, though the proposed project site is not located on a fault or within a fault zone. According to the Countywide Plan Earthquake Fault Zones Map (Figure VII-1), the proposed project is not located within a delineated Alquist-Priolo fault zone or other active fault zone. The project site is located in close proximity to several fault zones, including the San Andreas Fault (South) approximately 5.5 miles south of the site, the Waterman Canyon Fault less than a mile west/northwest of the project site, the Santa Ana Fault Zone less than a mile to the west and south. However, the proposed project is located outside of the boundaries of the delineated fault zones, and as such is not anticipated to be within a site that would experience ground rupture as a result of seismic activity. Based on the project site's location outside of a delineated fault zone,

the risk for ground rupture at the site location is low; it is not likely that future visitors to the new reservoir and pump station will be subject to seismic hazards from rupture of a known earthquake fault. Therefore, any impacts under this issue are considered less than significant; no mitigation is required.

ii. Strong Seismic Ground Shaking

Less Than Significant Impact – As stated in the discussion above, several faults run through the area surrounding the proposed project, and as with much of southern California, the proposed reservoir and pump station facilities would be subject to strong seismic ground shaking impacts should any major earthquakes occur in the future on regional faults, though the proposed project is located more than 5 miles from the nearest Alquist-Priolo fault zone. Due to the proximity of the active faults located in the vicinity of the project site, the project site and area can be exposed to significant ground shaking during major earthquakes on nearby regional faults. Like all other development projects in the County and throughout the Southern California Region, the proposed project would be required to comply with all applicable seismic design standards contained in 2022 California Building Code (CBC), including Section 1613 Earthquake Loads and provision of surge capacity in the reservoir. Compliance with the CBC seismic design standards would ensure that structural integrity would be maintained in the event of an earthquake. Therefore, impacts associated with strong ground shaking would be less than significant without mitigation.

iii. Seismic-Related Ground Failure Including Liquefaction

Less Than Significant Impact – According to the San Bernardino Countywide Plan Liquefaction and Landslide Hazards Map (Figure VII-2), the proposed project is not located within an area considered susceptible to liquefaction. The project site contains shallow soil and bedrock that will not support a high potential for liquefaction. Therefore, given that the project does not propose any habitable structures, it is anticipated that the proposed project will have a less than significant potential to be susceptible to seismic-related ground failure, including liquefaction.

iv. Landslides

Less Than Significant Impact – According to the County's, Landslide Map, the project site consists of land that has a minor susceptibility to land slide hazards. The proposed project site would be graded and compacted to establish a proper foundation for the proposed project, and with no proposed habitable structures, no potential events have been identified that would result in adverse human effects from landslides or that would cause landslides that could expose people or structures to such an event as a result of project implementation. Therefore, no significant impacts under this issue are anticipated, and no mitigation is required.

- b. *Less Than Significant With Mitigation Incorporated* – The potential for soil erosion or loss of topsoil is anticipated to be marginally possible at the site during ground disturbance associated with construction. The project site contains several existing small reservoirs and the existing pump station with a few trees and shrubs. County grading standards, best management practices (BMPs); a Storm Water Pollution Prevention Plan (SWPPP) or erosion control plan, and Water Quality Management Plan (WQMP) are required to control the potential significant erosion hazards which could degrade downstream water quality through transport of sediment off the site. The topography of the site slopes gently from the site to the south. During project construction when soils are exposed, temporary soil erosion may occur, which could be exacerbated by rainfall or snow melt. Project grading would be managed through the preparation and implementation of an erosion control plan or SWPPP, and will be required to implement BMPs to achieve concurrent water quality controls after construction is completed and the onsite water management activities are in operation. The following mitigation measures or equivalent BMPs shall be implemented to address these issues:

GEO-1 *Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. Where covering is not possible, measures such as the use of straw bales or sand bags shall be used to capture and hold eroded*

material on the project site for future cleanup such that erosion does not occur.

GEO-2 All exposed, disturbed soil (trenches, stored backfill, etc.) shall be sprayed with water or soil binders twice a day, or more frequently if fugitive dust is observed migrating from the site within which the project is being constructed.

With implementation of the above mitigation measures, implementation of the erosion control plan or SWPPP and WQMP and associated BMPs, any impacts under this issue are considered less than significant.

- c. *Less Than Significant Impact* – The project site is underlain by shallow soils and granitic bedrock. The proposed project includes minor grading and demolition of existing reservoirs. Construction of a new reservoir, and replacement of an existing pump station is proposed. Due to the presence of bedrock near the surface onsite, there is no potential for subsidence at the site. Also, without any habitable structures on the site, the potential that any unstable soil or geology could have a significant adverse direct impact on humans does not exist.
- d. *No Impact* – The proposed project is located on a ridge with coarse residual soils that evolved from granitic-type bedrock, which does outcrop within the project area. The soils are not expansive and since no habitable structures will be constructed onsite, there is no potential to create a substantial direct or indirect risk to human life or property.
- e. *No Impact* – The proposed project will not install a restroom. Therefore, no adverse impact can occur at the site due to any soil constraints associated with installation of septic tanks or alternative wastewater disposal systems. No impacts are anticipated. No mitigation is required.
- f. *No Impact* – The San Bernardino Countywide Plan indicates that the proposed project area is located in a low sensitivity area for paleontological resources because it is located on igneous bedrock. Previously unknown and unrecorded paleontological resources have a very low potential to be exposed during ground disturbing activities. No mitigation is required at this site.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

SUBSTANTIATION: The following information utilized in this section was obtained from the technical study "Running Springs Water District Air Quality & Greenhouse Gas Assessment" prepared by Urban Crossroads dated June 18, 2024. This document is provided as Appendix 1 of this Initial Study.

Background

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statutes and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific

protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e., company owned) and indirect sources (i.e., not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

Thresholds of Significance

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative, or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate.” The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO₂ equivalent/year. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO₂e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

a&b. *Less Than Significant Impact* – During project construction, the CalEEMod2020.4.0 computer model predicts that the construction activities will generate the annual CO₂e emissions identified in Table VIII-1. The project is assumed to occur over a 12-month period. During project construction, the CalEEMod2020.4.0 computer model predicts that the construction activities will generate the annual CO₂e emissions identified in Table VIII-1.

**Table VIII-1
TOTAL PROJECT GHG EMISSIONS**

Source	Emission (MT/year)				
	CO ₂	CH ₄	N ₂ O	Refrigerants	Total CO ₂ e
Annual construction-related emissions amortized over 30 years	9.01	3.67E-04	7.70E-05	1.91E-04	9.04
Energy	267.55	0.03	0.00	0.00	269.10
Stationary	0.61	0.00	0.00	0.00	0.61
Total CO₂e (All Sources)	278.76				

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered individually less-than-significant.

In March 2014, the San Bernardino Associated Governments and Participating San Bernardino County Cities Partnership (Partnership) created a final draft of the San Bernardino County Regional Greenhouse Gas Reduction Plan (Reduction Plan) for each of the 25 jurisdictional Partner Cities in the County. The plan was recently updated in March of 2021. The Reduction Plan was created in accordance with AB 32, which established a greenhouse gas limit for the state of California. The Reduction Plan seeks to create an inventory of GHG gases and develop jurisdiction specific GHG reduction measures and baseline information that could be used by the Partnership Cities of San Bernardino County, including the County itself.

Projects that demonstrate consistency with the strategies, actions, and emission reduction targets contained in the Reduction Plan would have a less than significant impact on climate change. The project will generate minimal GHG emissions as shown in TableVIII-1. There are really no measures directly applicable to this water infrastructure improvement project. The only emissions will be during construction and these emissions are minimal. Therefore, consistency with the Reduction Plan would result in a less than significant impact with respect to GHG emissions.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 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?	☐	☐	☒	☐

SUBSTANTIATION

- a. *Less Than Significant Impact* – Aside from the possible use of hazardous materials during construction (discussed below), the proposed project does not include activities that would need/require the routine transport, use, or disposal of hazardous materials. Therefore, the project has no potential to create a hazard to the public related to this activity.
- b. *Less Than Significant With Mitigation Incorporated* – The proposed project may 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 during construction. The proposed project will replace two existing reservoirs with a new single reservoir and upgrade and install a new pump station that will require some use of heavy equipment. During construction there is a potential for accidental release of petroleum products in sufficient quantity to pose a significant hazard to people and the immediate environment. The following mitigation measure will be incorporated into the erosion control plan prepared for the project and implementation of this measure can reduce this potential hazard to a less than significant level.

HAZ-1 *All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable federal, State, and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at a licensed disposal or treatment facility. This measure shall be incorporated into the erosion control plan or Stormwater Pollution Prevention Plan (SWPPP) prepared for this project. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.*

During operation, no storage or use of substantial quantities of hazardous materials is anticipated, other than the fuel in vehicles using the parking lot. Compliance with mandatory regulations, and preparation and implementation of MM **HAZ-1**, identified above, hazardous material impacts related to construction activities would be less than significant.

- c. *Less Than Significant Impact* – The project site is not located within one-quarter mile of any public school. The project is adjacent to forested land and residences. The proposed project is not anticipated to emit hazardous emissions as discussed under issue IX(a&b), above, as it is a project that would develop water system facilities with minimal use of hazardous substances to replace existing reservoirs and a pump station and no handling of acutely hazardous materials. Based on this information, implementation of the project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Impacts under this issue are considered less than significant. No mitigation is required.
- d. *No Impact* – The project site has been previously developed and contains existing reservoirs and a pump station. The proposed development will include limited mass grading of the reservoir site and pump station to provide level surfaces upon which to install the new water facilities. The project will not be located on a site that is included on a list of hazardous materials sites that are currently under remediation. According to the California State Water Board's GeoTracker website (consistent with Government Code Section 65962.5), which provides information regarding Leaking Underground Storage Tanks (LUST) and Department of Toxic Substance Control (DTSC) cleanup sites, there are no open LUST, DTSC, or other clean-up sites within close proximity of the project site. Refer to Appendix 4. Therefore, there is no potential for the project to be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, thereby creating a significant hazard to the public or the environment. Project construction and operation of the site to continue functioning as essential water infrastructure will have no potential to create a significant hazard to the population or to the environment from its implementation under this issue. No mitigation is required.
- e. *No Impact* – There are no airports in the community of Running Springs. Given that the proposed project is located outside of any Airport influence area, and that the proposed project does not contain habitable structures, the potential for the project to result in a safety hazard for people residing or working in the project area is negligible. Therefore, construction and operation of the project at this location would result in no potential safety hazard for people residing or working in the project area as a result of proximity to a public airport or private airstrip. No mitigation is required.
- f. *Less Than Significant With Mitigation Incorporated* – The proposed project has a minimal potential to interfere with an adopted emergency response plan or emergency evacuation plan. The nearest emergency evacuation routes to the project site are SR 18 and SR 330, which have been delineated as such on the San Bernardino County Mountain Area Emergency Routes Map. The proposed project will be constructed entirely within the boundaries of the project site, with minimal improvements to the site frontage and road entrance to the site.

As such, the proposed project should not experience substantial conflicts with surrounding traffic. However, with the implementation of MMs **TRAN-1** and **TRAN-2** identified in the Transportation Section of this document, there is a less than significant potential for the development of the project to physically interfere with any adopted emergency response plans, or evacuation plans.

- g. *Less Than Significant Impact* – The proposed project could not expose people or vehicles to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. The proposed project area is in an area susceptible to wildland fires, and is located within a delineated Very High Fire Hazard Severity Zone (VHFHSZ) in a Local Responsibility Area (LRA); the majority of the area surrounding the project vicinity are located within a VHFHSZ, as shown on Figure IX-1, the Countywide Plan Policy Map of Fire Hazard Severity Zones. The project is also located within the County Fire Safety Overlay. The proposed project is required to, and will, incorporate the most current fire protection designs to support the District's water delivery system, including adequate water storage for fire flow and fighting purposes. However, the potential for loss of life due to wildfire is considered to be low for the following reasons: The proposed new reservoir will store a larger amount of water which can be used to fight fires and, the project would not include any habitable structure, thus minimizing wildfire-related human risks at the site. Given the type of project proposed—reservoir and pump station—exposure to wildfire would have a limited potential to substantially damage human or man-made equipment (vehicles) as they could be removed from the area prior to or during a wildfire. As a result, the potential for loss of life and structures is considered to be a less than significant impact without mitigation.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such 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 onsite or offsite?	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?	☐	☐	☒	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?; or,	☐	☒	☐	☐
(iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

SUBSTANTIATION

- a. *Less Than Significant With Mitigation Incorporated* – The proposed project is located within the planning area of the Santa Ana Regional Water Quality Control Board (RWQCB). The project site contains features similar to much of the Running Springs area, including the western pine plant community. The project would be supplied with water by the Running Springs Water District. Water is supplied to customers by pumping groundwater from local aquifers to meet customer demand and transporting it to reservoirs for storage and use. No sewer connection will be required as the project site will not provide restrooms at the project site.

For a developed area, the only three sources of potential violation of water quality standards or waste discharge requirements are from generation of municipal wastewater, stormwater runoff, and potential discharges of pollutants, such as accidental spills. The project will not generate municipal wastewater. The County implements National Pollutant Discharge Elimination System (NPDES) requirements for surface water discharge for all qualified projects. The project site is approximately 2 acres in size, therefore, it is required to obtain coverage under the General Construction NPDES permit. A Stormwater Pollution Prevention Plan (SWPPP) with specific best management practices (BMPs) will be implemented for the project during construction. See mitigation below. To address

stormwater runoff and accidental spills within this environment both during construction and during future operations, this new project must ensure that site development implements a SWPPP to control potential sources of water pollution that could violate any standards or discharge requirements during construction. Also, a Water Quality Management Plan (WQMP) must be prepared and implemented to ensure that project-related surface runoff meets discharge requirements over the long term. The project design includes onsite stormwater capture and treatment facilities. The erosion control plan would specify the BMPs that the project would be required to implement during construction activities to ensure that all potential pollutants of concern, primarily sediment, are controlled, minimized, and/or otherwise appropriately treated prior to being discharged from the subject property as stormwater runoff. Compliance with the terms and conditions of the erosion control plan is mandatory and is judged adequate mitigation by the regulatory agencies for potential impacts to stormwater during construction activities. Implementation of the following mitigation measure will also contribute to reducing potential impacts to stormwater runoff to a less than significant level.

HYD-1 *The District shall require that the construction contractor prepare and implement a SWPPP which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater runoff and with the intent of keeping all products of erosion from moving offsite into receiving waters. The Plan shall include a Spill Prevention and Cleanup Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented in the SWPPP may include but not be limited to:*

- *The use of silt fences;*
- *The use of temporary stormwater desilting or retention basins;*
- *The use of water bars to reduce the velocity of stormwater runoff;*
- *The use of wheel washers on construction equipment leaving the site;*
- *The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;*
- *The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and*
- *Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.*

With implementation of the mandatory stormwater management plans and their BMPs, as well as MMs **HAZ-1** and **HYD-1** above, the development of the proposed project will not cause a violation of any water quality standards or waste discharge requirements.

- b. *Less Than Significant Impact* – The project does not propose the installation of any water wells that would directly extract groundwater and the change in pervious surfaces to impervious surfaces will be minimal because the project site itself is already developed with reservoirs and the existing pump station. The present site contains landscaped areas and will continue to do so and include surface water treatment facilities. The project is located in the north central portion of the Santa Ana River Watershed, and the underlying groundwater basins are unnamed. The proposed project would require minimal use of additional water because the proposed project does not increase the consumption of water, only the amount stored onsite after the new reservoir replaces the existing two smaller reservoirs. As such, the District estimates that the proposed project would require nominal water (about 0.5 AF) when it is first filled and no additional water after that. The potential impact under this proposed project is considered less than significant; no mitigation measures are required.
- c. (i) *Less Than Significant Impact* – The project site is currently a wholly disturbed site that is bounded on all sides by adjacent residential development or access roads. The proposed project is not

anticipated to significantly change the volume of flows downstream of the project site, and would not be anticipated to change the amount of surface water in any water body in an amount that could initiate a new cycle of erosion or sedimentation downstream of the project site. This is based on the project design that captures most of the new surface runoff within the project site. The proposed project will be developed to be relatively flat in support of the foundations for the two facilities. The proposed improvements include parking space, landscaping, and support facilities. The proposed project will include drainage structures to convey the future onsite runoff to natural flowlines, or to flow dissipation structures in order to discharge non-erosive flows offsite. Regardless, given that the proposed development would include drainage improvements to accommodate the facilities proposed as part of the proposed project (reservoir and pump station), on site flows within the project site will be collected and conveyed in a controlled manner such that some runoff will be collected and allowed to infiltrate on site. This system will be designed to capture any incremental increase in flows delivered in runoff from the project site or otherwise be detained on site and discharged in conformance with County requirements. The downstream drainage system will not be substantially altered and given the control of future surface runoff from the project site, the potential for downstream erosion or sedimentation will be managed to a less than significant impact level.

(ii) *Less Than Significant Impact* – The proposed project will alter the existing drainage pattern onsite but will maintain the existing offsite downstream drainage system through control of future discharges from the small site (site area is about 2 acres). The onsite drainage system will capture any incremental increase in runoff from the project site associated with project development. Onsite flows within the project site will be collected and conveyed in a controlled manner such that excess runoff will be collected and allowed to infiltrate on site through the provision of subsurface storm drains and new proposed stormwater chambers. The development of these drainage improvements would conform to County and District requirements and would prevent flooding onsite or offsite from occurring. Furthermore, the proposed project is required to prepare and implement a WQMP, which would identify specific measures to manage long-term runoff and stormwater onsite. Thus, the implementation of onsite drainage improvements and compliance with the measures developed in the site WQMP, stormwater runoff will not substantially increase the rate or volume of runoff in a manner that would result in substantial flooding on- or off-site. Impacts under this issue are considered less than significant with no mitigation required.

(iii) *Less Than Significant With Mitigation Incorporated* – The proposed project will alter the site such that stormwater runoff within the site may be increased, but will maintain the existing off-site downstream drainage system through control of future discharges from the site to be equivalent to the current conditions. Refer to issues ci and cii for more detailed information. Varying amounts of urban pollutants, such as motor oil, antifreeze, gasoline, pesticides, detergents, trash, animal wastes, and fertilizers, could be introduced into downstream stormwater within the watershed. However, the proposed project is not anticipated to generate discharges that would require pollution controls beyond those already incorporated into the project design as a standard operating procedure to meet water quality management requirements from the RWQCB. As such, the project is not anticipated to result in a significant adverse impact to water quality or flow volumes downstream of the project with implementation of mitigation outlined below.

Although BMPs are mandatory for the project to comply with established pollutant discharge requirements, the following mitigation measure is designed to establish a performance standard to ensure that the degree of water quality control is adequate to ensure the project does not contribute significantly to downstream water quality degradation.

HYD-2 *The District will select best management practices and reduce future non-point source pollution in surface water runoff discharges from the site to the maximum extent practicable, both during construction and following development. The identified BMPs shall be installed in accordance with schedules contained in the SWPPP and Water Quality Management Plan (WQMP).*

Compliance will also be ensured through fulfilling the requirements of a WQMP monitored by the District, and through the implementation of mitigation measure **HAZ-1**, which will ensure that discharge of polluted material does not occur or is remediated in the event of an accidental spill. The Plan must incorporate the BMPs that meet the performance standard established in **HYD-1** and **HYD-2** for both construction and operation stages of the project. Thus, the implementation of onsite drainage improvements and applicable requirements will ensure that that drainage and stormwater will not create or contribute runoff that would exceed the capacity of existing or planned offsite stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts under this issue are considered less than significant with mitigation required.

(iv) *Less Than Significant Impact* – According to the Countywide Plan Policy Map showing Flood Hazards (Figure X-1), the proposed project is not located within a flood hazard zone. As such, development of this site is not anticipated to redirect or impede flood flow at the project site, particularly given that onsite surface flows will be conveyed and captured by subsurface storm drains and new proposed stormwater management features to prevent increased runoff from leaving the project site or otherwise pretreat the runoff before leaving the site to meet County requirements, which would prevent flooding onsite or offsite from occurring. Therefore, impacts under this issue are considered less than significant and no mitigation is required.

- d. *Less Than Significant Impact* – As stated under issue X(c[iv]), the proposed project is located in an area with no known flood hazard, as mapped by the County. Furthermore, the proposed project is mapped outside of any dam inundation area delineated by the San Bernardino Countywide Plan (Figure X-2). The proposed project is located on a site just south of SR 18. The proposed project site is removed from the ocean by both elevation and a distance of 60 miles. Therefore, given that the proposed project is not located within a flood hazard, tsunami, or seiche zone, there is a less than significant potential for release of pollutants due to project inundation. No mitigation is required.
- e. *Less Than Significant Impact* – The proposed project is located within the unincorporated community of Running Springs, and the community is not located within a Sustainable Groundwater Management Act (SGMA) groundwater basin. By controlling water quality during construction and operations through implementation of both short-term and long-term BMPs at the site, no potential for conflict with or obstruction of the Regional Board's Water Quality Control Plan has been identified.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

SUBSTANTIATION:

- a. *No Impact* -The reservoir site is an existing part of the local community/neighborhood. Continued use of this approximately 2-acre site for water infrastructure has no potential to create a new physical division in the established neighborhood.
- b. *No Impact* - The reservoir site is an existing part of the local community/neighborhood. No conflict with any land use plan, policy or regulation related to mitigation will result from continuing to use the existing reservoir site for updated water infrastructure.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. MINERAL RESOURCES: 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?	☐	☐	☐	☒

SUBSTANTIATION:

- a. *No Impact* – The San Bernardino County Countywide Plan Program Environmental Impact Report (PEIR) map depicting Mineral Resource Zones indicates that the proposed project is not located within an area containing delineated mineral resources. Therefore, the development of the site is not anticipated to 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. No impacts are anticipated and no mitigation is required.
- b. *No Impact* – As stated above, the proposed project site does not contain any known mineral resources delineated by the County in its Countywide Plan, and is currently occupied by the existing ROWCO Reservoir water facilities. As such, the development of the proposed project site would not result in the loss of any available locally important resource recovery site delineated on a local general plan, specific plan or other land use plan, as no such delineations of this site are known. No impacts under this issue are anticipated and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a 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?	☐	☐	☐	☒

SUBSTANTIATION

Background

The existing background noise at the site reflects the operation of the pump station and reservoir filling activities and background sound from SR-18 traffic. This would be considered a moderate background noise environment. Traffic noise in this area will vary based on the volume of local traffic and recreation visitors to the San Bernardino Mountains. Because community receptors are more sensitive to unwanted noise intrusion during more sensitive evening and nighttime hours, state law requires that an artificial dBA (A-weighted decibel) increment be added to quiet time noise levels. The State of California has established guidelines for acceptable community noise levels that are based on the Community Noise Equivalent Level (CNEL) rating scale (a 24-hour integrated noise measurement scale). The guidelines rank noise land use compatibility in terms of "normally acceptable," "conditionally acceptable," and "clearly unacceptable" noise levels for various land use types. The State Guidelines, Land Use Compatibility for Community Noise Exposure, single-family homes are "normally acceptable" in exterior noise environments up to 60 dB CNEL and "conditionally acceptable" up to 70 dB CNEL based on this scale. Multiple family residential uses are "normally acceptable" up to 65 dB CNEL and "conditionally acceptable" up to 70 CNEL. The nearest sensitive receptors are individual single-family residences that surround the Project Site. Noise contours from SR 18 would indicate background sound levels of 60 dBA CNEL at the reservoir site.

a. *Less Than Significant With Mitigation Incorporated –*

Short Term Construction Noise

Short-term construction noise impacts associated with the proposed project will occur during grading and reservoir and pump station construction activities at the project site. The earth-moving equipment are the noisiest type of equipment typically ranging from 82 to 85 dB at 50 feet from the source. Temporary construction noise is exempt from the County Noise Performance Standards between 7:00 a.m. and 6:00 p.m., except Sundays and Federal holidays. The proposed project would be constructed within the confines of these hours, and therefore would be in compliance with the County's Noise Performance Standards. Thus, construction of the project would result in less than significant noise impact. However, to minimize the noise generated on the site to the extent feasible, the following mitigation measures shall be implemented:

NOI-1 *All construction vehicles and fixed or mobile equipment shall be equipped with operating and maintained noise control devices. Enforcement will be accomplished by random field inspections by District personnel.*

- NOI-2** *All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided adequate hearing protection devices to ensure no hearing damage will result from construction activities.*
- NOI-3** *No construction activities shall occur during the hours of 7 PM through 7 AM, Monday through Saturday; at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists.*
- NOI-4** *Equipment not in use for five minutes shall be shut off.*
- NOI-5** *Equipment shall be maintained and operated such that loads are secured from rattling or banging.*
- NOI-6** *Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.*
- NOI-7** *The District shall post a readily visible sign identifying a phone number to contact a person responsible for responding to noise complaints from nearby residences. The goal shall be to respond to any noise complaint within 24-hours and to initiate noise controls to reduce noise originating from the site during construction.*

Operational noise is generally associated with the pump station operations. The District has the opportunity to install new concrete brick housing for the new pump station and shall attenuate pump station noise to 50 dBA at the property line. This measure shall be incorporated into the District's final design requirements for pump station. Please note that this will result in a lower noise environment than currently exists at the project site.

- b. *Less Than Significant Impact* – Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by vibration of room surfaces is called structure borne noises. Sources of groundborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous or transient. Vibration is often described in units of velocity (inches per second), and discussed in decibel (VdB) units in order to compress the range of numbers required to describe vibration. Vibration impacts related to human development are generally associated with activities such as train operations, some construction activities, and heavy truck movements.

The background vibration-velocity level in residential areas (from ongoing activities in a residential area such as cars driving by, etc.) is generally about 50 VdB, while the groundborne vibration directly adjacent to an industrial facility requiring movement of heavy machinery might be greater. Groundborne vibration is normally perceptible to humans at approximately 65 VdB, while 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible. Construction activity can result in varying degrees of groundborne vibration, but is generally higher when associated with pile driving and rock blasting. Other construction equipment—such as air compressors, light trucks, hydraulic loaders, etc.—generates little or no significant ground vibration. The County Development Code offers minimal guidance on Vibration.

Vibration related to construction activities will be less than significant because the project will limit construction to daylight hours. Operational vibration is anticipated to be less than significant given that the filling of a reservoir is relatively quiet and there are no large pieces of heavy machinery that would operate at or near the property line. Therefore, any vibration generated within the site is not anticipated to substantially exceed the perceptible threshold. Thus, any impacts under this issue are considered less than significant. No other mitigation is required.

- c. *No Impact* – There are no public airports in or near the community of Running Springs. Thus, the project is not located within a safety zone requiring an aviation easement as this project is not located beneath the flight path for any airport. Given that the proposed project is located outside of any 65 CNEL dBA airport noise contour, the project area has a less than significant potential to expose people residing or working in the project area to excessive noise levels due to any airport operations. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. POPULATION AND HOUSING: Would the project:				
a) Induce substantial 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?	☐	☐	☐	☒

SUBSTANTIATION

- a&b. *No Impact* – The proposed project is the replacement of water infrastructure at an existing water storage and pump station site. The project site is already developed with reservoirs and a pump station that will be retained in comparable uses. There will be no loss of housing or displacement of existing residences. Because the project does not contain any habitable structures, it has no potential to induce substantial population growth within the community. The new water system infrastructure is not forecast to increase the rate of growth within the community which is forecast to remain within the supply capability of the District's water supply capability. No adverse population or housing impacts will occur and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. 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:				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

SUBSTANTIATION

a-e. *Less Than Significant and No Impact* – The proposed project is the replacement of an existing reservoir and pump station at the ROWCO Reservoir site in the community of Running Springs. Demand for the public services summarized above is anticipated to be very low for these water infrastructure replacements. There would be no adverse effect on schools, parks or other public facilities. In fact, by enhancing water storage at these District's facilities, fire protection in the community should be enhanced by this proposed project. A steel reservoir and concrete block building for the pump station should place very little demand on community fire protection resources. Water infrastructure facilities can create a potential for some trespass, but this should be minimal within the existing residential neighborhood. The impact analysis indicates that its construction and operation will not result in new significant adverse impacts to the environment. Therefore, the potential impacts to these public services are considered a less than significant or nonexistent on the public services environment.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. RECREATION:				
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?	☐	☐	☐	☒

SUBSTANTIATION

a-b. *No Impact* - The proposed project is the replacement of an existing reservoir and pump station at the ROWCO Reservoir site in the community of Running Springs. The proposed project will not adversely

impact any recreation facilities. There would be no adverse effect on recreation. The impact analysis indicates that the project's construction and operation will not result in new significant adverse impacts to the recreational environment. Therefore, the potential impacts to local recreational facilities are considered to result in no impact on the recreation environment of the community.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d) Result in inadequate emergency access?	☐	☒	☐	☐

SUBSTANTIATION

CEQA Section 15064.3, subdivision (b):

(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

- a. *Less Than Significant Impact* – The proposed project is the construction of a replacement reservoir and pump station at the existing ROWCO Reservoir site. Once completed, the new reservoir and

pump station will receive periodic inspection visits with daily traffic being at most a few trips per week. Construction traffic is forecast to range between a maximum of 20 and 30 trips per day, including truck deliveries. Although the local circulation system consists of two-lane local roadways, adequate access exists for the estimated number of construction-related vehicles to access the site during daylight hours with minimal conflicts on SR 18. A combined traffic and parking management plan (**TRAN-1**) will be prepared by the contractor and approved by the District and local law enforcement prior to initiating construction activities at the site. Thus, implementation of the proposed project will not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. No mitigation is required.

- b. *No Impact* – As described above, the proposed project is designed to enhance the local water system and all trips will be conducted to support this goal. The proposed project is not forecast to increase VMT through creation of any new permanent source of traffic. No impact to VMT is expected to result from implementing this proposed project.
- c. *Less Than Significant With Mitigation Incorporated* – The proposed project will occur entirely within the ROWCO Reservoir site and adjacent street boundaries. Large trucks delivering equipment or removing excavated dirt or debris can enter the site without major conflicts with the flow of traffic on the adjacent roadways used to access the site. Primary access to the site will be provided along existing roadways. Additionally, the proposed project would be required to comply with all applicable fire code and ordinance requirements for construction, parking and access to the project site. Emergency response and evacuation procedures would be coordinated with the County, as well as the local fire department. As such, to mitigate the potential impacts to traffic flow during construction, the following mitigation measure shall be implemented:

TRAN-1 *The District shall require its contractors prepare a construction and parking traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:*

- *Develop circulation and detour plans, if necessary, to minimize impacts to local street and State Highway circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.*
- *To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.*
- *Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.*
- *For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.*
- *Coordinate with owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owners or operators of the timing, location, and duration of construction activities.*

TRAN-2 *The District shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable County and Caltrans standard design requirements.*

Upon implementation of a construction traffic management plan, any potential increase in hazards due to short-term design features or incompatible use will be considered less than significant in the short term. In the long term, no impacts to any hazards or incompatible uses in existing or planned roadways are anticipated. The implementation of the project would not create any new permanent hazards on surrounding roadways. Thus, any impacts are considered less than significant with implementation of mitigation.

- d. *Less Than Significant With Mitigation Incorporated* – The proposed project consists of construction and operational activities that will take place using the local circulation system. Access to the site is adequate for emergency vehicles. There is an emergency evacuation route located near the site, as State Highway 18/State Highway 330 serve as the San Bernardino County Mountain Area Evacuation Routes provided as Figure IX-2. With implementation of MMs **TRAN-1** and **TRAN-2**, adequate emergency access along local roadways will be maintained. Thus, because of the lack of substantial adverse impact on local circulation, significant impacts to emergency access are avoided. No further mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial change in the significance of tribal cultural resources, 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 the California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

SUBSTANTIATION

- a&b. *No Impact* – No Native American Tribes have contacted Running Springs Water District to establish AB 52 consultation. Therefore, no adverse impact is forecast to occur under this topic.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIX. UTILITIES AND SERVICE SYSTEMS: 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 telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

SUBSTANTIATION

- a. *Less Than Significant Impact* – The proposed project is the construction of a replacement reservoir and pump station at the existing ROWCO Reservoir site. All of the required utilities to support this water infrastructure improvement project are already located at the project site. The primary utilities that will be needed at the site for future operation are water and electricity, including telecommunications to support remote monitoring. No new relocations or expansions of infrastructure will be required to support the proposed project.
- b. *Less Than Significant Impact* – Please refer to Section X.b) for a discussion of available water supply for the community. Adequate water is available to meet the small, one-time estimated increase in water stored at the new reservoir. The project itself will not result in any substantial increase in overall demand for water supply, only the amount of water stored at the site to meet system-wide water management goals will be modified. No significant adverse impact is forecast and no mitigation, other than use of standard low consumption water hardware at the site is required.
- c. *Less Than Significant Impact* – The District delivers wastewater to a wastewater treatment plant that it operates. The proposed project will not directly or indirectly increase wastewater flows. No mitigation is required.
- d. *Less Than Significant Impact* – The replacement reservoir and pump station construction will generate some solid waste. Current regulations require that up to 50 percent of the construction waste generated at the site be recycled. The District will require the contractor to meet the current regulatory requirements for disposal of construction waste. Little or no waste will be generated during operations and if any is generated it will be hauled away by visiting staff for proper disposal. No mitigation is required.

- e. *Less Than Significant Impact* – The proposed project does not involve any unusual or difficult solid waste generation activities that have a potential to conflict with federal, state and local management and reduction statutes. The contractor will be required to recycle and dispose of construction waste and future operations are not forecast to generate substantial solid waste. The proposed project construction and operational solid waste management will be integrated into the District's existing waste management program and will comply with solid waste management and reduction statutes and regulations. Potential impacts under this issue are considered less than significant with no mitigation.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of 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?	☐	☐	☒	☐

SUBSTANTIATION

- a. *Less Than Significant With Mitigation Incorporated* – Please refer to the evaluation of emergency response in the Traffic Section, Section XVII.). As indicated in that discussion, the proposed project facilities will be constructed within the confines of the project site, but certain construction activities could result in limited interference with emergency evacuation along proximate access roads. Since activities within the local access roads are controllable, implementation of mitigation measure **TRAN-1** can ensure that any potential conflicts with an evacuation plan or emergency access will not rise to a level of a significant impact. No additional mitigation is required.
- b. *Less Than Significant Impact* – The proposed project does not provide habitable space for humans. Additionally, constructing the replacement reservoir and pump station will result in thinning the trees on the existing site. This has the consequence of reducing the fuel load at the project site. Thus, the proposed project is not forecast to exacerbate wildfire risks at this location. Regardless, the proposed project area is an area susceptible to wildland fires, and is located within an area delineated as a Very High Fire Hazard Severity Zone (VHFHSZ) in a Local Responsibility Area (LRA); the majority of the area surrounding Running Springs and SR-18 is located within a VHFHSZ, as shown on Figure IX-1, the Countywide Plan Policy Map of Fire Hazard Severity Zones. Overall, due to type of proposed use, the site preparation, and the lack of habitable units, the proposed project's potential to exacerbate wildfire risk is considered a less than significant impact.

- c. *Less Than Significant Impact* – The proposed project site is already connected to water and electricity infrastructure adjacent to the project site. These connections will require minimal alterations to the existing systems and have a very low potential to exacerbate fire risk at the project site. Further, due to proximity to this infrastructure, there should be minimal temporary and no ongoing impacts to the environment at the project site once facilities are installed and operational. Impacts under this category are forecast to be less than significant.
- d. *Less Than Significant Impact* – The proposed project is the replacement of the existing ROWCO Reservoir and a pump station on the existing site. A minimal potential exists to expose humans to significant risks post fire as the site will not be inhabited and will actually increase the amount of water stored for fire-fighting purposes. Due to the project site's location on a shallow-sloped ridge, the potential exposure of the site to hazards such as flooding or post fire instability onsite is low. The potential impact under this issue is considered less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XXI. MANDATORY FINDINGS OF SIGNIFICANCE:				
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 which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

SUBSTANTIATION

The analysis in this Initial Study and the findings reached indicate that the proposed project can be implemented without causing any new project specific or cumulatively considerable potential or unavoidable significant adverse environmental impacts, after application of mitigation measures. No mitigation is required to control some of the potential environmental impacts of the proposed project to a less than significant impact level, but there are several potentially significant impacts that do require imposition of mitigation measures. The following findings are based on the detailed analysis in the Initial Study of all environmental topics and the implementation of the mitigation measures identified in the previous text and summarized following this section.

- a. *Less Than Significant With Mitigation Incorporated* – The project has limited potential to cause significant impact to any biological or cultural resources due to historic ground disturbance. The project has been identified as having no potential to degrade the quality of the natural environment, substantially reduce habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. Based on the status of the project site there is no potential for any surface cultural resources with any integrity or context. However, contingency mitigation is required to ensure that trees removed are replaced and that accidental exposure of subsurface cultural resources is properly managed and mitigated.
- b. *Less Than Significant With Mitigation Incorporated* – The project has eighteen (18) potential impacts that are individually limited, but may be cumulatively considerable. The issues of Air Quality, Biology, Cultural Resources, Energy, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, and Transportation require compliance with mitigation measures to ensure that cumulative effects do not rise to cumulatively considerable level. The project is not considered growth-inducing, as defined by *State CEQA Guidelines*, as it would solely support existing District operations with no increase in population or community growth. All other environmental issues were found to have no significant project specific and cumulative impacts without implementation of mitigation. The potential cumulative environmental effects of implementing the proposed project have

been determined to be less than considerable, and thus, would have a less than significant cumulative impact.

- c. *Less Than Significant With Mitigation Incorporated* – The project will achieve long-term benefit to the District by providing greater water storage without increasing water demand. The short-term impacts associated with the project, which are mainly construction-related impacts, are less than significant with implementation of proposed mitigation measures. The issues of Air Quality, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise and Transportation require the implementation of these requirements to reduce human impacts to a less than significant level. All other environmental issues were found to have no significant impacts on humans without implementation of mitigation. All potential for direct human effects from implementing the proposed project have been determined to be less than significant.

Conclusion

This document evaluated all CEQA issues contained in the latest Initial Study Checklist form. The evaluation determined that either no impact or less than significant impacts would be associated with the issues of Aesthetics, Agricultural and Forestry Resources, Land Use and Planning, Mineral Resources, Population/Housing, Public Services, Recreation, and Utilities and Service Systems, without mitigation. Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, and Wildfire will require mitigation to achieve less than significant impacts. There are no new project specific significant impacts or cumulatively considerable impacts from implementing the proposed project.

Based on the findings in this Initial Study, the Running Springs Water District proposes to adopt an Initial Study and Mitigated Negative Declaration. The District will hold a future meeting for the project to make a decision, the date for which has not yet been determined. The District will consider this document as providing substantiation that an Initial Study/Mitigated Negative Declaration is the appropriate CEQA environmental determination for the District's ROWCO Reservoir Project. If you comment on this document, you will be notified of the date of the hearing.

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*, (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Revised 2019

Authority: Public Resources Code sections 21083 and 21083.09

Reference: Public Resources Code sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3/ 21084.2 and 21084.3

SUMMARY OF MITIGATION MEASURES

Aesthetics

- AES-1 Where the removal of trees is required to install the new reservoir, the District shall replace all trees removed at a 1:1 ratio.

Air Quality

- AQ-1 Fugitive Dust Construction
- Apply soil stabilizers or moisten inactive areas.
 - Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).
 - Cover all stock piles with tarps at the end of each day or as needed.
 - Provide water spray during loading and unloading of earthen materials.
 - Minimize in-out traffic from construction zone
 - Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard
 - Sweep streets daily if visible soil material is carried out from the construction site
- AQ-2 Exhaust Emissions Control
- Utilize well-tuned off-road construction equipment.
 - Establish a preference for contractors using Tier 3 or better rated heavy equipment.
 - Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

Biological Resources

- BIO-1 Vegetation removal, including any tree removal or pruning, and structure demolitions should be conducted outside of the typical bird nesting season (between September 1st and February 1st. Otherwise, to avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist should conduct pre construction nesting bird surveys prior to Project related disturbance to suitable nesting areas to identify any active nests. The nesting bird surveys should consist of a minimum of five (5) consecutive survey days and should include an additional three (3) consecutive nights of survey for SPOW and other nocturnal species. Nocturnal spotted owl surveys should be conducted between the hours of 9:00 pm. and midnight, during appropriate weather conditions (e.g., no rain or winds), and should include a spot calling survey component that would utilize California spotted owl call playback at predetermined fixed calling points.
- BIO-2 If no active nests are found, no further action would be required. If an active nest is found, the biologist should set appropriate no work buffers around the nest which would be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity, and duration of disturbance. The nest(s) and buffer zones should be field checked weekly by a qualified biological monitor. The approved no work buffer zone should be clearly marked in the field, within which no disturbance activity should commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

Cultural Resources

- CUL-1 In the event that cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and an archaeologist meeting the Secretary of Interior's professional qualification standards in archaeology shall be retained to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period.

Geology and Soils

- GEO-1 Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. Where covering is not possible, measures such as the use of straw bales or sand bags shall be used to capture and hold eroded material on the project site for future cleanup such that erosion does not occur.
- GEO-2 All exposed, disturbed soil (trenches, stored backfill, etc.) shall be sprayed with water or soil binders twice a day, or more frequently if fugitive dust is observed migrating from the site within which the project is being constructed.

Hazards and Hazardous Materials

- HAZ-1 All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable federal, State, and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at a licensed disposal or treatment facility. This measure shall be incorporated into the erosion control plan or Stormwater Pollution Prevention Plan (SWPPP) prepared for this project. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.

Hydrology and Water Quality

- HYD-1 The District shall require that the construction contractor prepare and implement a SWPPP which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater runoff and with the intent of keeping all products of erosion from moving offsite into receiving waters. The Plan shall include a Spill Prevention and Cleanup Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented in the SWPPP may include but not be limited to:
- The use of silt fences;
 - The use of temporary stormwater desilting or retention basins;
 - The use of water bars to reduce the velocity of stormwater runoff;
 - The use of wheel washers on construction equipment leaving the site;
 - The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;
 - The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and
 - Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.
- HYD-2 The District will select best management practices and reduce future non-point source pollution in surface water runoff discharges from the site to the maximum extent practicable, both during construction and following development. The identified BMPs shall be installed in accordance with schedules contained in the SWPPP and Water Quality Management Plan (WQMP).

Noise

- NOI-1 All construction vehicles and fixed or mobile equipment shall be equipped with operating and maintained noise control devices. Enforcement will be accomplished by random field inspections by District personnel.
- NOI-2 All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided adequate hearing protection devices to ensure no hearing damage will result from construction activities.
- NOI-3 No construction activities shall occur during the hours of 7 PM through 7 AM, Monday through Saturday; at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists.
- NOI-4 Equipment not in use for five minutes shall be shut off.
- NOI-5 Equipment shall be maintained and operated such that loads are secured from rattling or banging.
- NOI-6 Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.
- NOI-7 The District shall post a readily visible sign identifying a phone number to contact a person responsible for responding to noise complaints from nearby residences. The goal shall be to respond to any noise complaint within 24-hours and to initiate noise controls to reduce noise originating from the site during construction.

Transportation

- TRAN-1 The District shall require its contractors prepare a construction and parking traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:
- Develop circulation and detour plans, if necessary, to minimize impacts to local street and State Highway circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
 - To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
 - Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.
 - For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.
 - Coordinate with owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owners or operators of the timing, location, and duration of construction activities.
- TRAN-2 The District shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable County and Caltrans standard design requirements.

REFERENCES

CRM TECH, "Historical/Archaeological Resources Survey Report, ROWCO Reservoirs and Booster Replacement Project" dated June 9, 2024

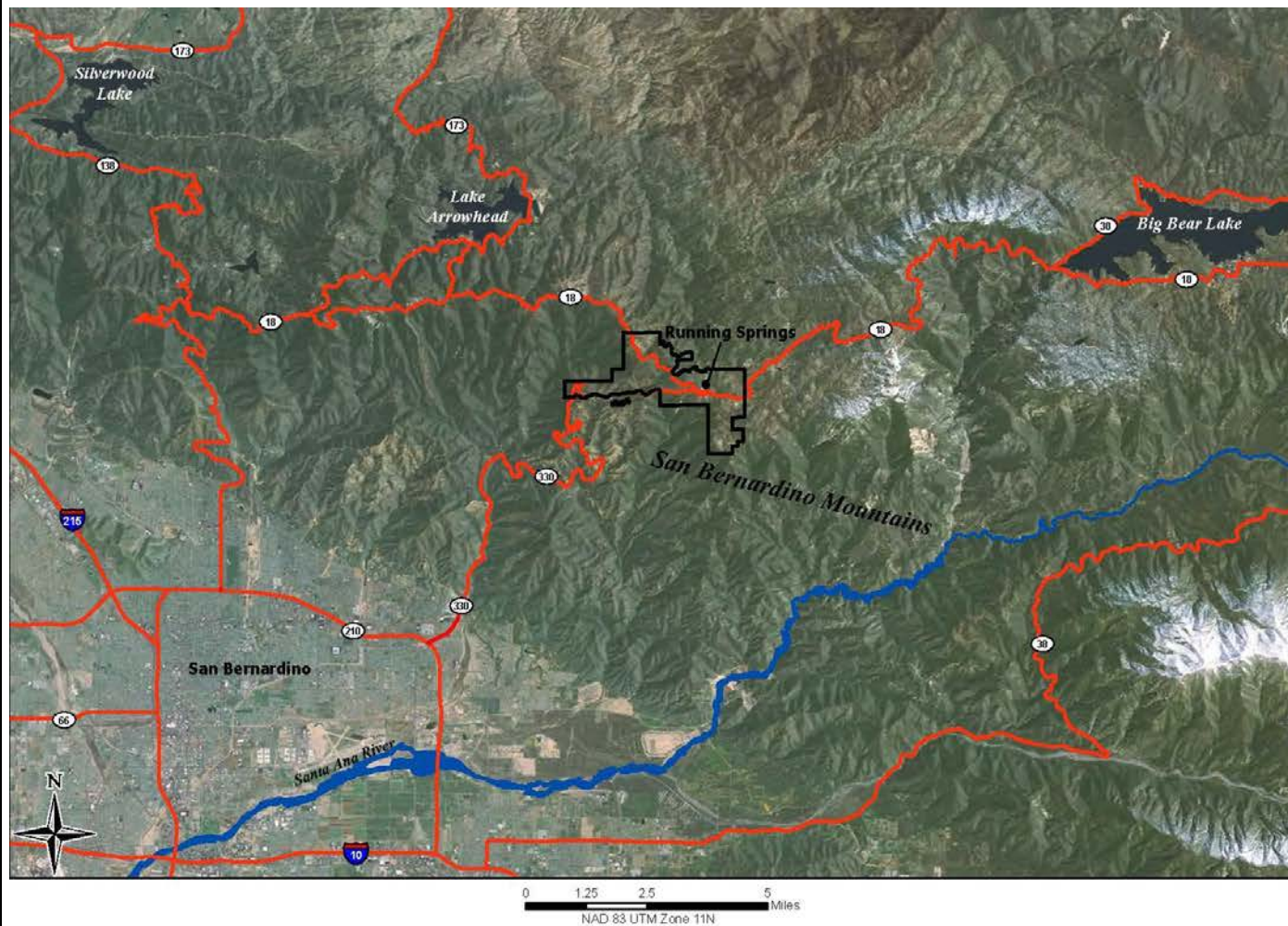
Jennings Environmental, "Biological Resources assessment for the Running Springs Water District Hollymont Reservoir Project, in the Unincorporated Town of Running Springs, San Bernardino County, California" dated August 11, 2023

San Bernardino County General Plan dated 2007

San Bernardino General Plan EIR dated February 2007

Urban Crossroads, "Running Springs Water District Air Quality and Greenhouse Gas Assessment" dated June 18, 2024

FIGURES



Basemap Source: www.esri.com

Regional Location



Regional Map

FIGURE 1

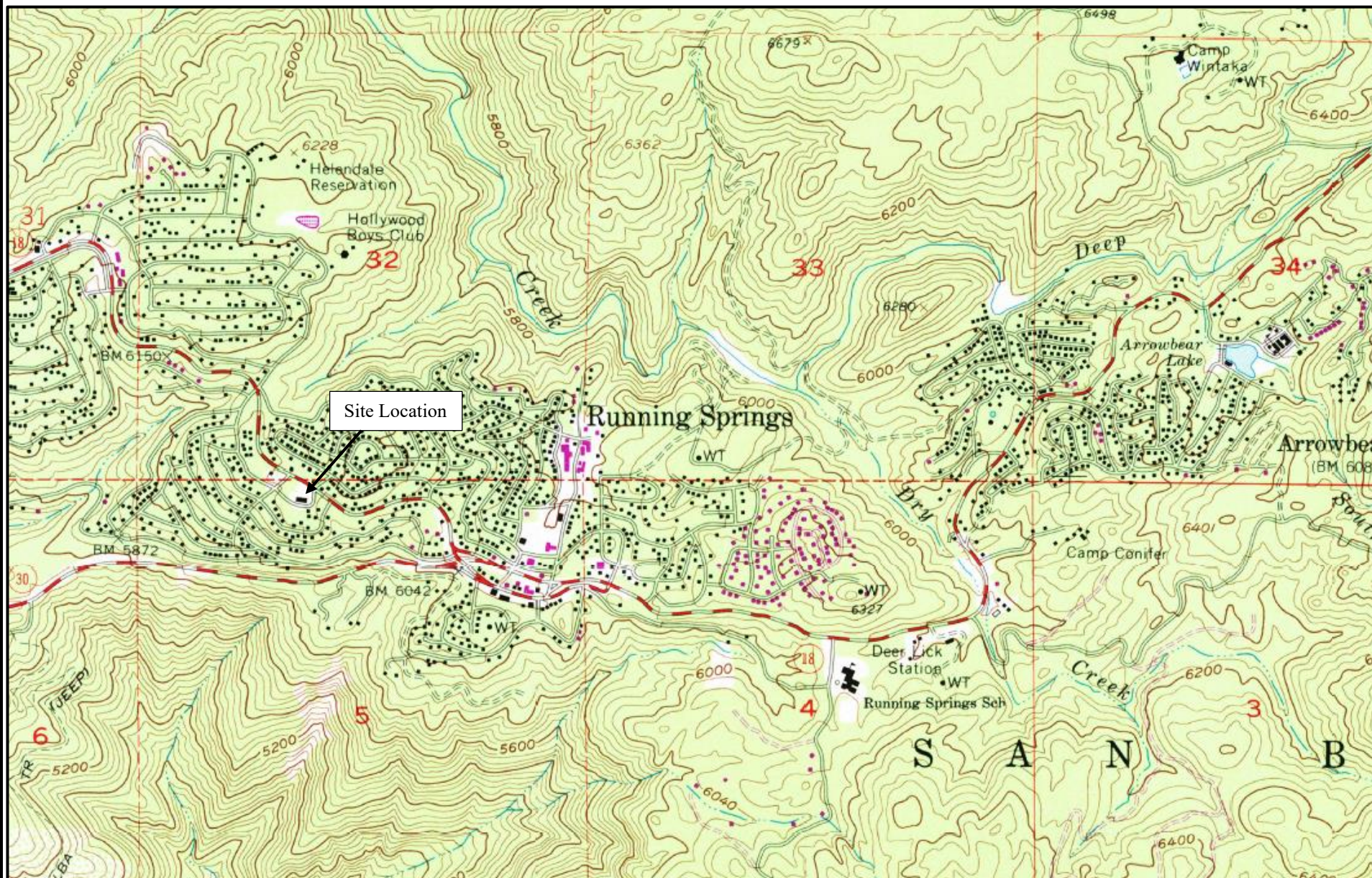
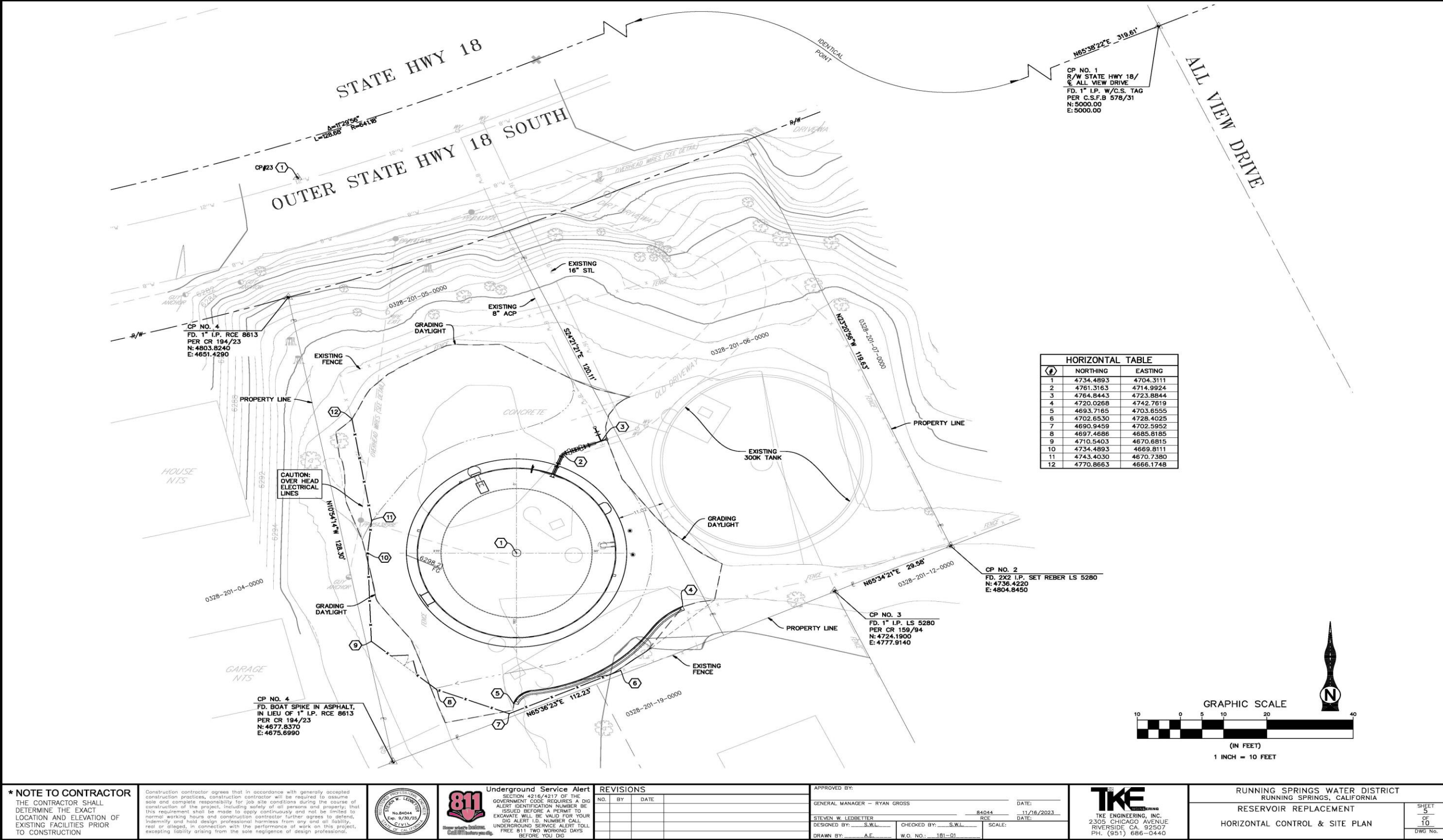


FIGURE 2



FIGURE 3

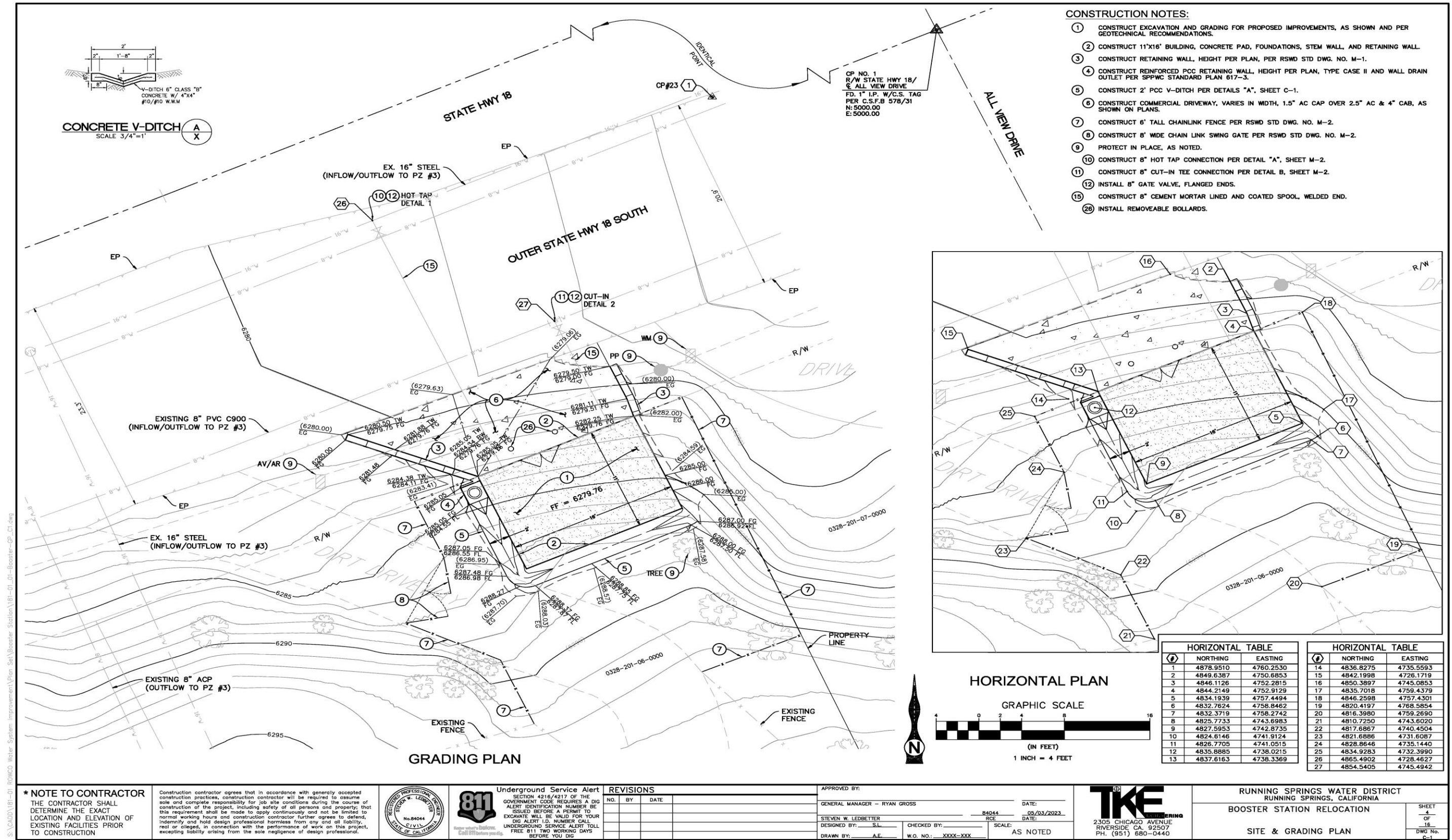


SOURCE: TKE Engineering

FIGURE 4

Tom Dodson & Associates
Environmental Consultants

Illustration of Proposed Location



SOURCE: TKE Engineering

Tom Dodson & Associates
Environmental Consultants

FIGURE 5

Site Plan

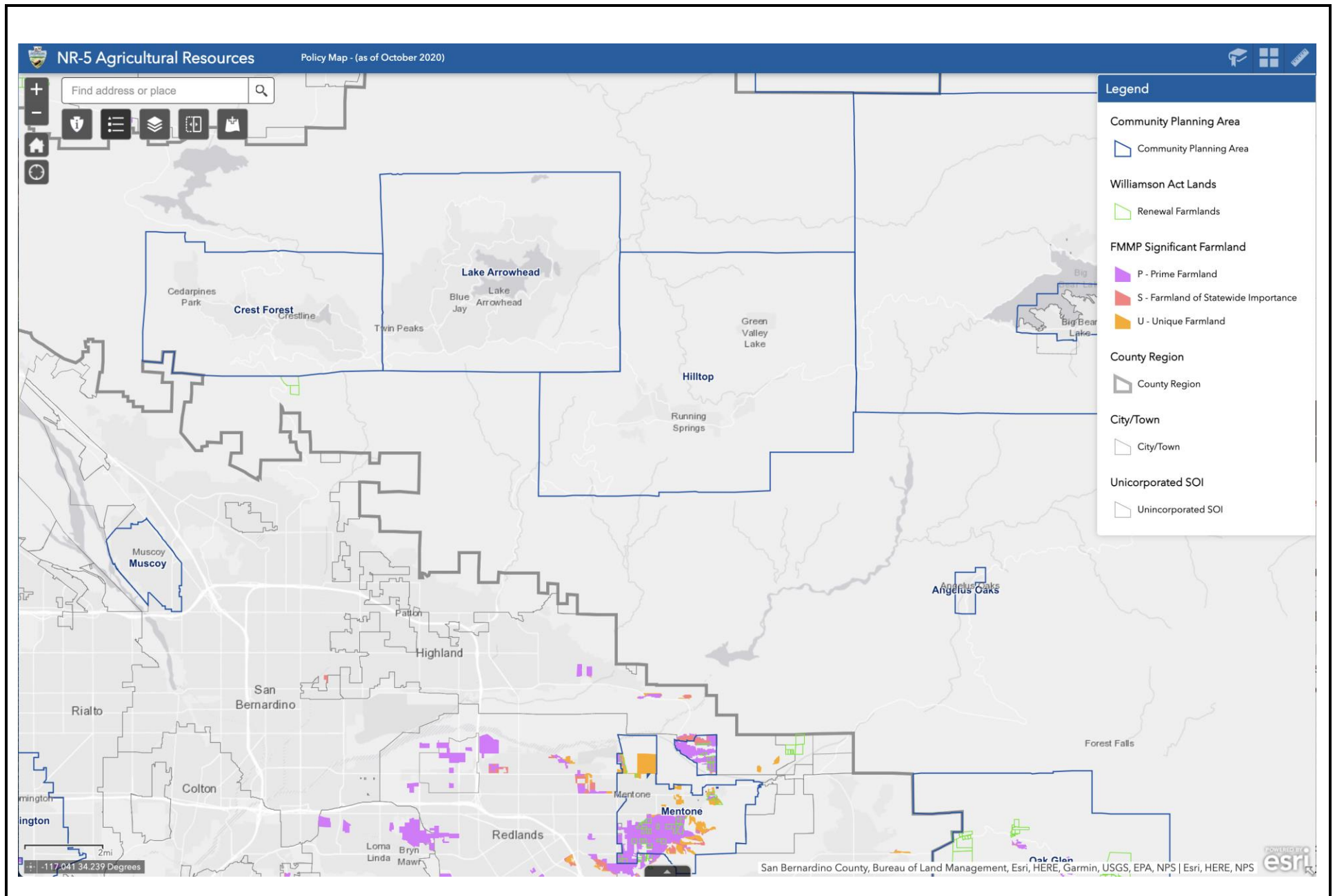


FIGURE II-1

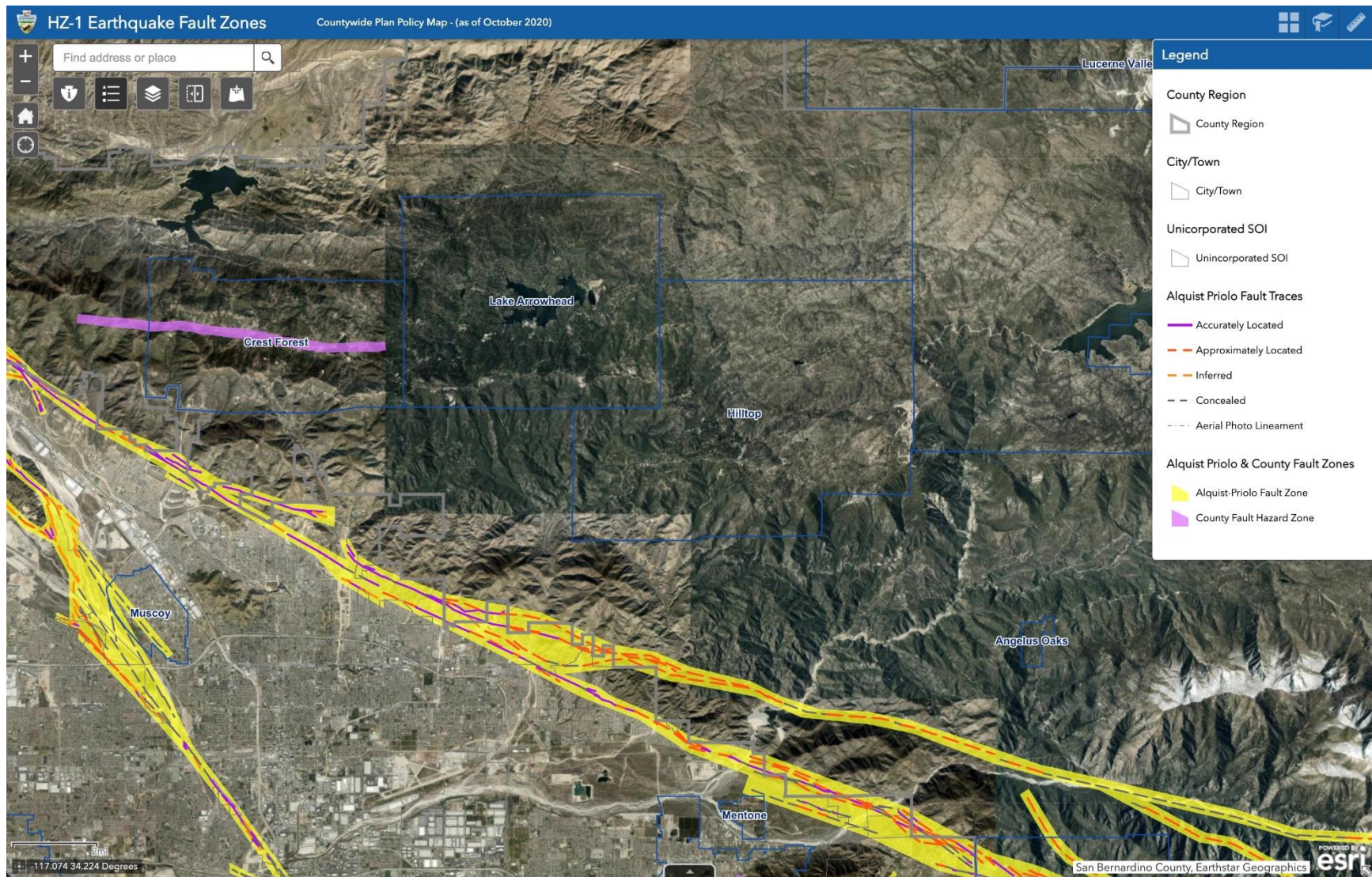


FIGURE VII-1

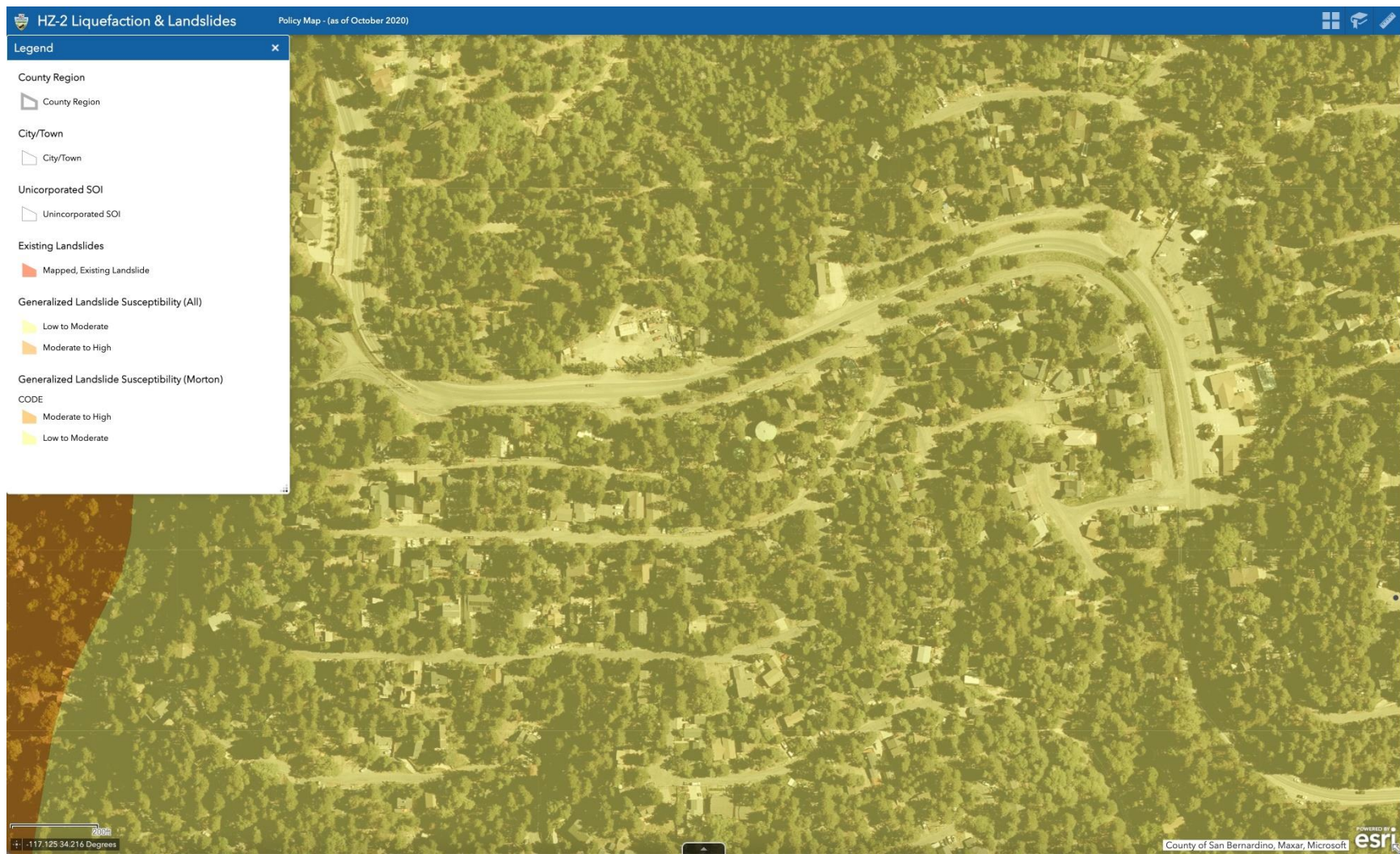


FIGURE VII-2

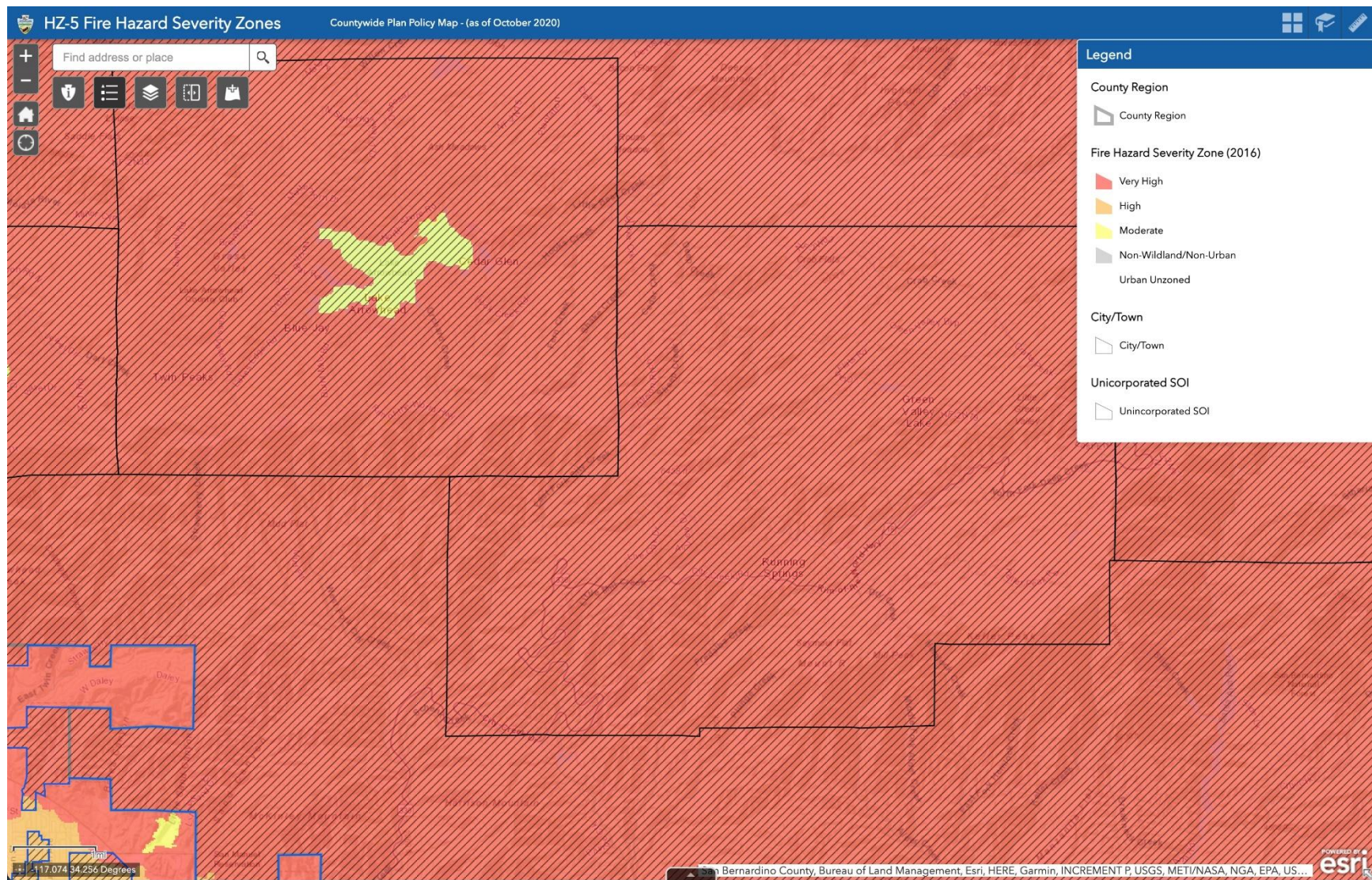


FIGURE IX-1

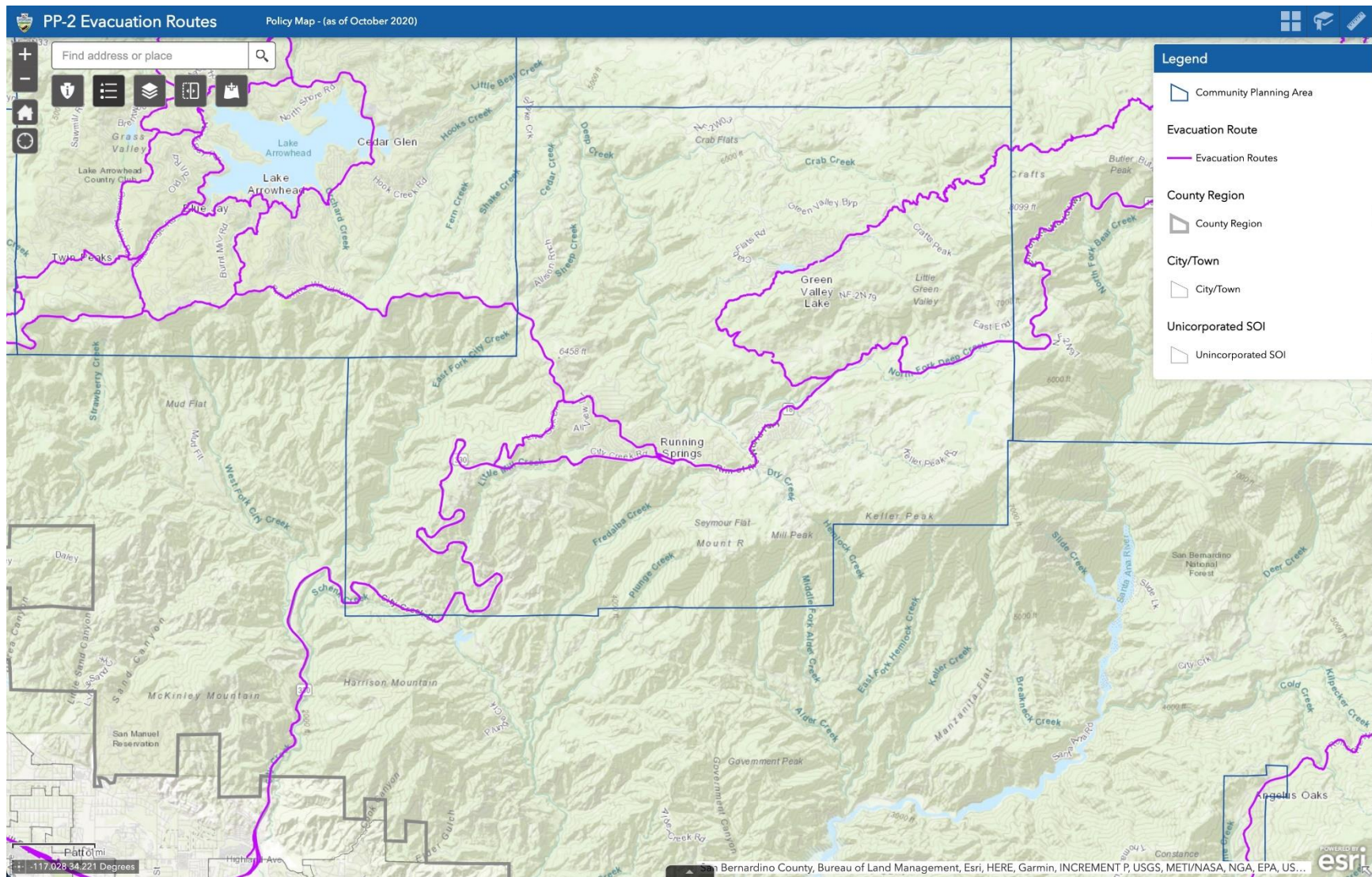


FIGURE IX-2

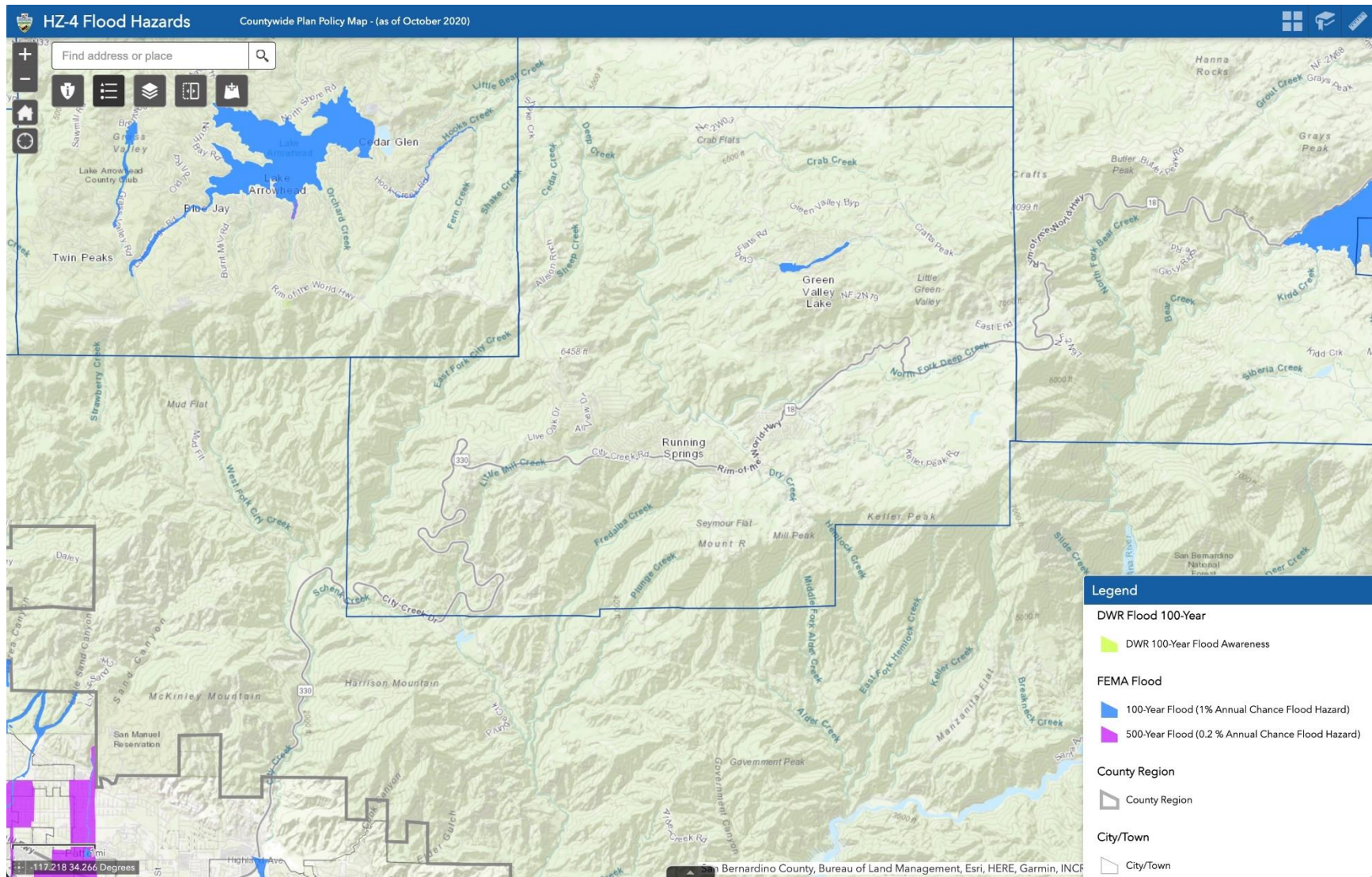


FIGURE X-1

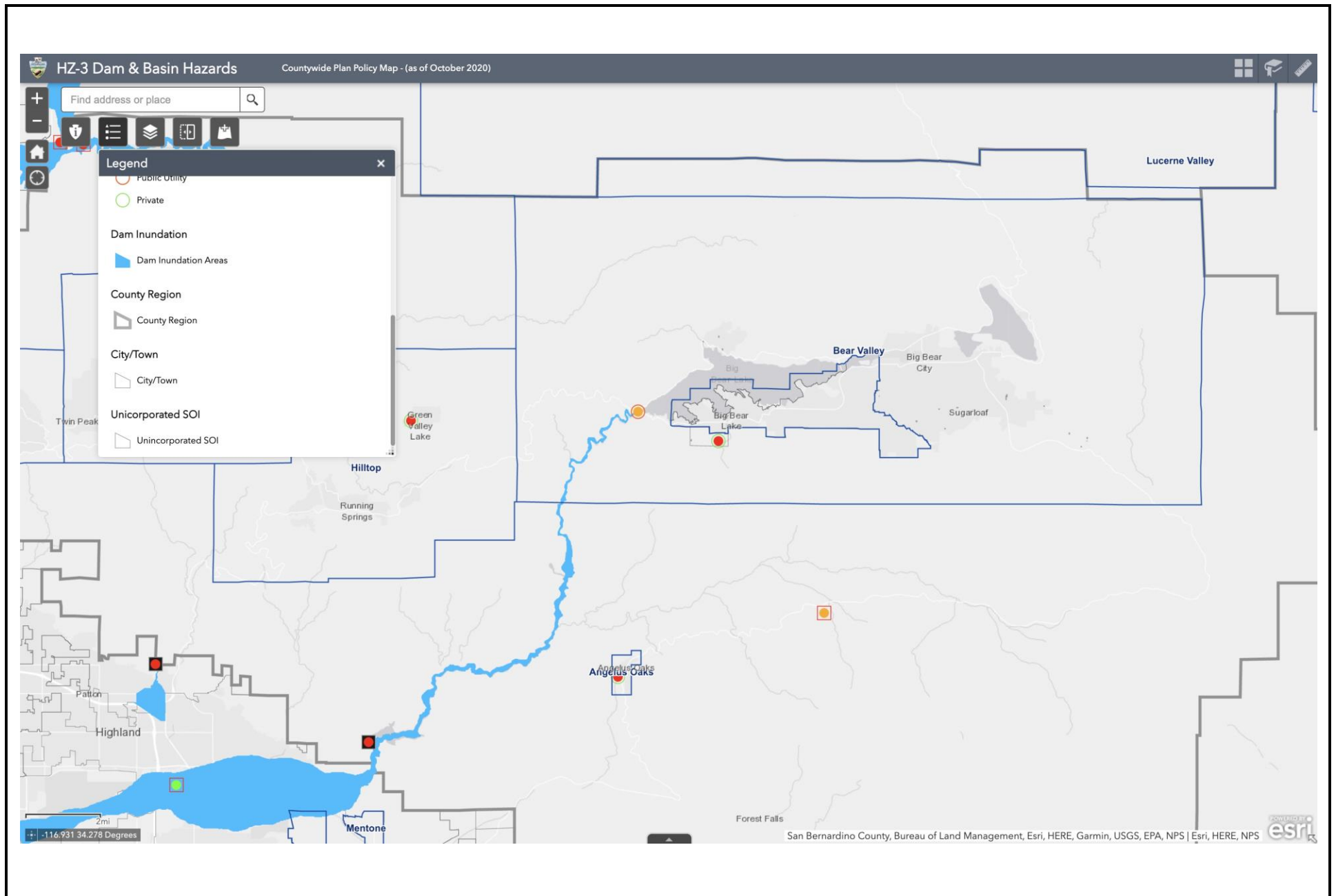


FIGURE X-2

APPENDIX 1

AIR QUALITY / GHG ANALYSES

DATE: June 18, 2024
TO: Tom Dodson-Hamilton, Tom Dodson & Associates
FROM: Haseeb Qureshi, Urban Crossroads Inc.
Ali Dadabhoy
Shannon Wong
JOB NO: 16124-02 AQ & GHG Assessment

RUNNING SPRINGS WATER DISTRICT AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Tom Dodson-Hamilton

Urban Crossroads, Inc. is pleased to provide the following Air Quality & Greenhouse Gas Assessment for the Running Springs Water District (**Project**), which is located near Old Highway 18 South between Hollymont Drive and All View Drive in the Community of Running Springs within the County of San Bernardino.

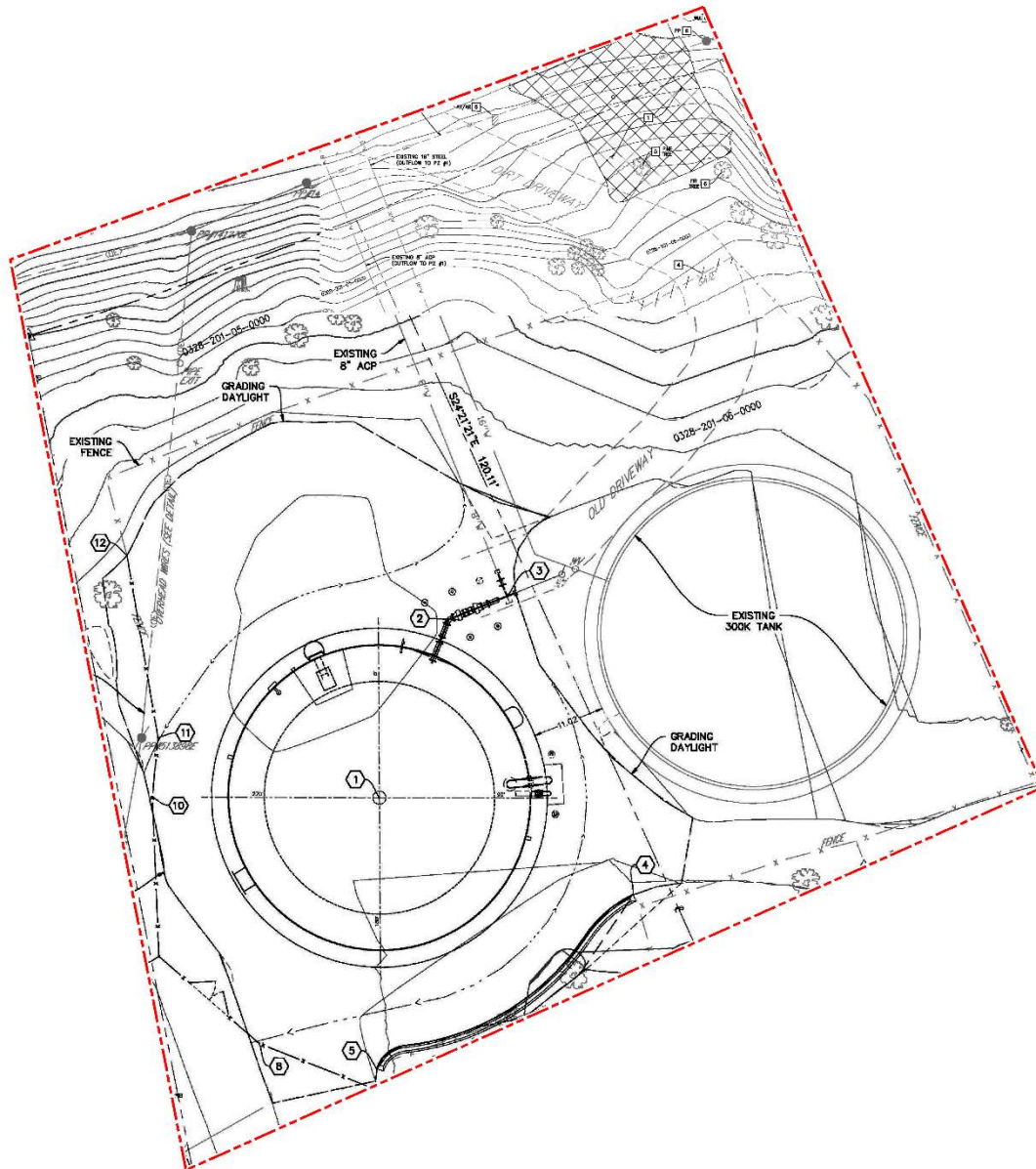
PROJECT OVERVIEW

The Runnings Springs Water District (RSWD) proposes to replace the two existing small reservoirs and pump station located on the existing ROWCO site with a replacement reservoir and new pump station, as shown on Exhibit 1.

SUMMARY OF FINDINGS

Results of the assessment indicate that the Project would result in a less than significant with respect to air quality and greenhouse gases.

EXHIBIT 1: SITE PLAN



PROJECT AIR QUALITY IMPACTS

AIR QUALITY SETTING

SOUTH COAST AIR BASIN (SCAB)

The Project site is located in the SCAB within the jurisdiction of South Coast Air Quality Management District (SCAQMD) (1). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As stated, the Project site is located within the SCAB, a 6,745-square-mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

Regional Climate

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to mid 60s (degrees Fahrenheit [°F]). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO₂) to sulfates (SO₄) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent (%) along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed “Santa Anas” each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the “Catalina Eddy,” a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NO_x) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

Wind Patterns and Project Location

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

Criteria Pollutants

Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called “criteria” pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone (O_3) (precursor emissions include NO_x and reactive organic gases (ROG), CO, particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The Riverside County portion of the SCAB is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 , PM_{10} , and $PM_{2.5}$.

Toxic Air Contaminants (TAC) Trend

In 1984, as a result of public concern for exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of TAC emissions resulting from mobile and area sources, such as cars, trucks, stationary products, and consumer products. According to the Ambient and Emission Trends of Toxic Air Contaminants in California journal article (2) which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly (between 1990 and 2012). The seven TACs studied include those that are derived from mobile sources: diesel particulate matter (DPM), benzene (C_6H_6), and 1,3-butadiene (C_4H_6); those that are derived from stationary sources: perchloroethylene (C_2Cl_4) and hexavalent chromium ($Cr(VI)$); and those derived from photochemical reactions of emitted VOCs: formaldehyde (CH_2O) and acetaldehyde (C_2H_4O).¹ The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, and individuals with pre-existing respiratory or cardiovascular illness. Structures that house these persons or places where they gather are defined as “sensitive receptors.” These structures typically include uses such as residences, hotels, and hospitals where an individual can remain for 24 hours. Consistent with the localized significance threshold (LST) Methodology, the nearest land use where an individual could remain for 24 hours to the Project site has been used to determine construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$, since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time.

Receptors in the Project study area are described below. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade,

¹ It should be noted that ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

whichever is closer to the Project site. Receptors in the Project study area are shown on Exhibit 2 under the Localized Construction Emissions section later in the report.

- Receptor R1 represents the existing residence at 31075 S Outer State Hwy Dr, approximately 19 feet west of the Project site.
- Receptor R2 represents the existing residence at 31096 Wild Oak Dr, approximately 33 feet south of the Project site.
- Receptor R3 represents the existing residence at 31112 Wild Oak Dr, approximately 23 feet south of the Project site.
- Receptor R4 represents the existing residence at 31103 Outer 18 Hwy S, approximately 25 feet east of the Project site.
- Receptor R5 represents the existing residence at 31080 Hilltop Blvd, approximately 140 feet north of the Project site.

REGULATORY BACKGROUND

FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the national ambient air quality standards (NAAQS) for O₃, CO, NO_x, SO₂, PM₁₀, and lead (Pb) (3). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (4). The CAA also mandates that each state submit and implement state implementation plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (5) (6). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O₃, NO₂, SO₂, PM₁₀, CO, PM_{2.5}, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O₃ and to adopt a NAAQS for PM_{2.5}.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_x. NO_x is a collective term that includes all forms of NO_x which are emitted as byproducts of the combustion process.

CALIFORNIA REGULATIONS

CARB

The CARB, which became part of the California EPA (CalEPA) in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the California ambient air quality standards (CAAQS) for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO₄, visibility, hydrogen sulfide (H₂S), and vinyl chloride (C₂H₃Cl). However, at this time, H₂S and C₂H₃Cl are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (7) (8).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROG_s, NO_x, CO and PM₁₀. However, air basins may use an alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

AQMP

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMP to meet the state and federal ambient air quality standards (9). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

APPLICABLE REGULATORY REQUIREMENTS

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings) (10) (11).

SCAQMD Rule 403

This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities. This rule is intended to reduce PM₁₀ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM₁₀ suppression techniques are summarized below.

- Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
- All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
- All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
- Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.

METHODOLOGY

In May 2024, the California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of the CalEEMod Version 2022.1.1.23. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (12). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality and greenhouse gas emissions.

Standards of Significance

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the California Environmental Quality Act Guidelines (*CEQA Guidelines*) (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (13):

- **Threshold 1:** Conflict with or obstruct implementation of the applicable air quality plan.
- **Threshold 2:** Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

- **Threshold 3:** Expose sensitive receptors to substantial pollutant concentrations.
- **Threshold 4:** Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

AIR QUALITY REGIONAL EMISSIONS THRESHOLDS

The SCAQMD has developed regional significance thresholds for criteria pollutants, as summarized at Table 1 (14). The SCAQMD's CEQA Air Quality Significance Thresholds (March 2023) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 1: MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS

Pollutant	Construction	Operations
NO _x	100 lbs./day	55 lbs./day
VOC	75 lbs./day	55 lbs./day
PM ₁₀	150 lbs./day	150 lbs./day
PM _{2.5}	55 lbs./day	55 lbs./day
SO _x	150 lbs./day	150 lbs./day
CO	550 lbs./day	550 lbs./day

lbs./day – Pounds Per Day

AIR QUALITY LOCALIZED EMISSIONS THRESHOLDS

For this Project, the appropriate SRA for the LST analysis is the SCAQMD Central San Bernardino Mountains monitoring station (SRA 37). LSTs apply to CO, NO₂, PM₁₀, and PM_{2.5}. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size. The SCAQMD's screening look-up tables are utilized in determining localized impacts. It should be noted that since the look-up tables identify thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized to determine localized significance thresholds. Consistent with SCAQMD guidance, the thresholds presented in Table 2 were calculated by interpolating the threshold values for the Project's disturbed acreage.

It should be noted that though the Project is less than 1 acre in size, the acres disturbed is based on the equipment list and days during each phase of construction according to the anticipated maximum number of acres a given piece of equipment can pass over in an 8-hour workday. The equipment-specific grading rates are summarized in the CalEEMod user's guide, Appendix A: Calculation Details for CalEEMod (15). It should be noted that the disturbed area per day is representative of a piece of equipment making multiple passes over the same land area. In other words, one Rubber Tired Dozer can make multiple passes over the same land area totaling 0.5 acres in a given 8-hour day. Appendix A of the CalEEMod User Manual only identifies equipment-specific grading rates for Crawler Tractors, Graders, Rubber Tired Dozers, and Scrapers; therefore, Tractors/Loaders/Backhoes equipment that was included in the demolition, site preparation and grading phase was replaced with Crawler Tractors. The Project's construction

activities could disturb a maximum of approximately 0.5 acre per day for demolition, building construction, paving, 1.5 acres per day for site preparation, and 2 acres per day for grading activities. Any other construction phases of development would result in lesser emissions and consequently lesser impacts than what is disclosed herein. As such, Table 2 presents thresholds for localized construction and operational emissions. It should be noted that a 1 acre per day disturbance area for demolition, building construction, and paving activities was utilized as this is the SCAQMD look-up tables minimum acreage.

TABLE 2: MAXIMUM DAILY LOCALIZED EMISSIONS THRESHOLDS

Source	Activity	Emissions (lbs./day)			
		VOC	NO _x	PM ₁₀	PM _{2.5}
Construction	Demolition	118 lbs./day	667 lbs./day	4 lbs./day	3 lbs./day
	Site Preparation	144 lbs./day	820 lbs./day	6 lbs./day	4 lbs./day
	Grading	170 lbs./day	972 lbs./day	7 lbs./day	4 lbs./day
	Building Construction	118 lbs./day	667 lbs./day	4 lbs./day	3 lbs./day
	Paving	118 lbs./day	667 lbs./day	4 lbs./day	3 lbs./day
Operations	N/A	270 lbs./day	1,746 lbs./day	4 lbs./day	2 lbs./day

¹ Source of localized significance threshold (LSTs) is provided on page 16.

CONSTRUCTION ACTIVITIES

Construction activities associated with the Project would result in emissions of VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}. Construction-related emissions are expected from the following activities:

- Demolition
- Site Preparation
- Grading
- Building Construction
- Paving

DEMOLITION ACTIVITIES

Removal of the existing water reservoir and pump station will be required, resulting in approximately 343 square feet of demolished material. The CalEEMod default trip length of 20-miles is used to analyze the emissions associated with hauling of demolition debris.

GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions.” Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil

moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Per client provided data, the Project would require 40 cubic yards of export for earthwork activities, and a haul trip length of 5-miles will be used to analyze the emissions associated with export activities.

ON-ROAD TRIPS

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. Worker and hauling trips are based on CalEEMod defaults.

CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in July 2024 and would last through July 2025. The construction schedule utilized in the analysis represents a “conservative” analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.² The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (16).

CONSTRUCTION EQUIPMENT

Equipment modeled is based on CalEEMod defaults. Consistent with industry standards and typical construction practices, each piece of equipment will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

REGIONAL CONSTRUCTION EMISSIONS SUMMARY

The estimated maximum daily construction emissions are summarized on Table 3, and as shown, the Project construction-source emissions would not exceed SCAQMD regional thresholds. Thus, the Project would result in a less than significant impact associated with construction activities. Detailed Construction model outputs are presented in Attachment A.

² As shown in the CalEEMod User's Guide Version 2022, Appendix G “Table G-11. Statewide Average Annual Offroad Equipment Emission Factors” as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3: REGIONAL CONSTRUCTION EMISSIONS SUMMARY

Source	Emissions (lbs./day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer						
2025	2.26	15.62	19.75	0.03	0.78	0.61
Winter						
2024	2.15	19.55	17.75	0.02	3.34	1.95
2025	2.26	15.62	19.51	0.03	0.78	0.61
Maximum Daily Emissions	2.26	19.55	19.75	0.03	3.34	1.95
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

¹PM₁₀ and PM_{2.5} source emissions reflect 3x daily watering per SCAQMD Rule 403 for fugitive dust.

REGIONAL OPERATIONAL EMISSIONS

Long-term air quality impacts occur from mobile source emission generated from Project-related traffic and from stationary source emissions generated from natural gas. The proposed Project primarily involves construction activity. For on-going operations, mobile emissions would be generated by the motor vehicles traveling to and from the Project sites during on-going maintenance. However, the project would generate a nominal number of traffic trips for periodic maintenance and inspections and would not result in any substantive new long-term emissions sources. As this Project involves the operations of a replacement reservoir and pump station, it is assumed that consumer products would not be used.

All operational equipment associated with the Project would be electrically powered and would not directly generate air emissions. It is our understanding that the proposed Project will include the use of a 350-horsepower pump.

Stationary area source emissions are typically generated by the consumption of natural gas for space and water heating devices and the use of consumer products. Stationary energy emissions would result from energy consumption associated with the proposed Project. However, the proposed Project may include the use of an emergency diesel generator supplying power to the treatment plant in case of emergency. If a backup generator were installed, the lead agency would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources to reduce air pollution, and to attain and maintain NAAQS and CAAQS within the SCAB. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment. A backup generator would be used only in emergency situations and for routine testing and maintenance purposes. Based on guidance from SCAQMD, the backup generator would operate for a maximum of 200 hours annually or approximately 0.5 hours per day. Emissions associated with the backup generator are summarized on Table 4, as shown, emissions from the backup generator would not contribute a substantial amount of emissions capable of exceeding SCAQMD thresholds. As Project operations would not exceed SCAQMD

thresholds, the Project would not violate an air quality standard or contribute to an existing violation. Therefore, Project operations would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be less than significant. Detailed model outputs for the backup diesel generator emissions calculations are presented in Attachment A.

Emissions associated with the pump are summarized in Table 4. Project operational-source emissions would not exceed the numerical thresholds of significance established by the SCAQMD for any criteria pollutant, a less than significant impact would occur for Project-related operational-source emissions and no mitigation is required.

TABLE 4: TOTAL PROJECT REGIONAL OPERATIONAL EMISSIONS

Source	Emissions (lbs./day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer						
Stationary Source	0.01	0.03	0.04	0.00	0.00	0.00
Total Maximum Daily Emissions	0.02	0.03	0.04	0.00	0.00	0.00
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO
Winter						
Stationary Source	0.01	0.03	0.04	0.00	0.00	0.00
Total Maximum Daily Emissions	0.02	0.03	0.04	0.00	0.00	0.00
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

LOCALIZED CONSTRUCTION EMISSIONS

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology) (17). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs). The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4³. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses. It should be noted that SCAQMD also states that Projects that are

³ The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "...equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

statutorily or categorically exempt under CEQA would not be subject to LST analyses. As such, although not required for this Project, LST analysis is presented to further underscore that there are in fact no significant impacts associated with the Project.

The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project's potential to cause an individual or cumulatively significant impact. The nearest land use where an individual could remain for 24 hours to the Project site has been used to determine localized construction and operational air quality impacts for emissions of PM₁₀ and PM_{2.5} (since PM₁₀ and PM_{2.5} thresholds are based on a 24-hour averaging time). The nearest receptor used for evaluation of localized impacts of PM₁₀ and PM_{2.5} is location R1 existing residence at 31075 S Outer State Hwy Dr, approximately 19 feet (6 meters) west of the Project site. Receptors in the Project study area shown on Exhibit 2. It should be noted that the *LST Methodology* explicitly states that *"It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters (17)."* As such, for evaluation of localized PM₁₀ and PM_{2.5}, a 25-meter distance will be used.

As previously stated, and consistent with LST Methodology, the nearest industrial/commercial use to the Project site is used to determine construction and operational LST air impacts for emissions of NO_x and CO as the averaging periods for these pollutants are shorter (8 hours or less) and it is reasonable to assume that an individual could be present at these sites for periods of one to 8 hours. As there are no industrial/commercial uses located at a closer distance than the residential homes that are located adjacent to the Project site, the same 25-meter distance will be used for evaluation of localized impacts of NO_x and CO.

EXHIBIT 2: SENSITIVE RECEPTOR LOCATIONS



LEGEND:

Site Boundary

⊗ Receptor Locations

— Distance from receptor to Project site boundary (in feet)

Table 5 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Outputs from the model runs for construction LSTs are provided in Attachment A. As shown in Table 5, emissions resulting from the Project construction will not exceed the numerical thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, a less than significant impact would occur for localized Project-related construction-source emissions and no mitigation is required.

TABLE 5: PROJECT LOCALIZED CONSTRUCTION IMPACTS

On-Site Emissions	Emissions (lbs./day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Demolition				
Maximum Daily Emissions	15.58	16.03	0.69	0.62
SCAQMD Localized Threshold	118	667	4	3
Threshold Exceeded?	NO	NO	NO	NO
Site Preparation				
Maximum Daily Emissions	16.62	14.58	2.85	1.70
SCAQMD Localized Threshold	144	820	6	4
Threshold Exceeded?	NO	NO	NO	NO
Grading				
Maximum Daily Emissions	19.46	17.09	3.20	1.92
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	NO	NO	NO	NO
Building Construction				
Maximum Daily Emissions	10.94	11.63	0.44	0.40
SCAQMD Localized Threshold	118	667	4	3
Threshold Exceeded?	NO	NO	NO	NO
Paving				
Maximum Daily Emissions	5.24	7.22	0.23	0.21
SCAQMD Localized Threshold	118	667	4	3
Threshold Exceeded?	NO	NO	NO	NO

LOCALIZED OPERATIONAL EMISSIONS

According to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed Project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). As previously discussed, the Project would generate a nominal number of traffic trips in the context of on-going maintenance resulting in a negligible amount of new mobile source emissions. The proposed Project will include the use of a pump and an emergency generator. Localized emissions are summarized in Table 6.

TABLE 6: PROJECT LOCALIZED OPERATIONAL IMPACTS

On-Site Emissions	Emissions (lbs./day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	19.55	19.75	3.34	1.95
SCAQMD Localized Threshold	270	1,746	4	2
Threshold Exceeded?	NO	NO	NO	NO

AIR QUALITY IMPACTS – CONSISTENCY WITH THRESHOLD NO. 1***Would the Project conflict with or obstruct implementation of the applicable air quality plan?***

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743-square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In December 2022, the SCAQMD released the Final 2022 AQMP (2022 AQMP). The 2022 AQMP continues to evaluate current integrated strategies and control measures to meet the CAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (18). Similar to the 2016 AQMP, the 2022 AQMP incorporates scientific and technological information and planning assumptions, including the 2020-2045 RTP/SCS, a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (19). The Project's consistency with the AQMP will be determined using the 2022 AQMP as discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the 1993 CEQA Handbook (20). These indicators are discussed below.

The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The violations that under this criterion refer to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded. As evaluated, the Project's regional and localized construction and operational-source emissions would not exceed applicable regional significance thresholds. As such, a less than significant impact is expected.

On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The 2022 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in County of San Bernardino General Plan is considered to be consistent with the AQMP.

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.

The County of San Bernardino within the Hilltop Community Plan designates the Project site as "Single Residential (RS-10M)." This designation allows for residential uses with a maximum density of 4 dwelling units per acre (21). As previously stated, the proposed Project includes the initiative to demolish the two existing small reservoirs and pump station and construct a replacement reservoir and pump station. Although this finding is inconsistent with the current zoning designation, it should be noted that the site currently functions as a water storage facility. The proposed Project aims to install a replacement reservoir and pump station rather than introduce a use that is more intensive than the current operations on site. Furthermore, the Project, as evaluated herein would not exceed the regional or localized air quality significance thresholds.

On the basis of the preceding discussion, the Project is determined to be consistent with the AQMP and a less than significant impact is expected.

AIR QUALITY IMPACTS – CONSISTENCY WITH THRESHOLD NO. 2

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

The County of San Bernardino within the Hilltop Community Plan designates the Project site as "Single Residential (RS-10M)." This designation allows for residential uses with a maximum density of 4 dwelling units per acre (21). As previously stated, the proposed Project includes the initiative to demolish the two existing small reservoirs and pump station and construct a replacement reservoir and pump station. Although this finding is inconsistent with the current zoning designation, it should be noted that the site currently functions as a water storage facility. The

proposed Project aims to install a replacement reservoir and pump station rather than introduce a use that is more intensive than the current operations on site. Furthermore, the Project, as evaluated herein would not exceed the regional or localized air quality significance thresholds. The CAAQS designates the Project site as nonattainment for O₃, PM₁₀, and PM_{2.5} while the NAAQS designates the Project site as nonattainment for O₃ and PM_{2.5}.

The SCAQMD has published a report on how to address cumulative impacts from air pollution: White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (22). In this report the SCAQMD clearly states (Page D-3):

"...the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which SCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

Construction Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

Operational Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project operational-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, the proposed Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

AIR QUALITY IMPACTS – CONSISTENCY WITH THRESHOLD NO. 3

Would the expose sensitive receptors to substantial pollutant concentrations?

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction.

Additionally, the Project will not exceed the SCAQMD localized significance thresholds during operational activity. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations.

CO “HOT SPOT” ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or “hot spots.” Further, detailed modeling of Project-specific CO “hot spots” is not needed to reach this conclusion. An adverse CO concentration, known as a “hot spot,” would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment. To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO “hot spot” analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods⁴. This “hot spot” analysis did not predict any exceedance of the 1-hour (20.0 ppm) or 8-hour (9.0 ppm) CO standards, as shown on Table 7.

TABLE 7: CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Boulevard/Veteran Avenue	4.6	3.5	3.7
Sunset Boulevard/Highland Avenue	4	4.5	3.5
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.2
Long Beach Boulevard/Imperial Highway	3	3.1	8.4

Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

⁴ The CO “hot spot” analysis conducted in 2003 is the most current study used for CO “hot spot” analysis in the SCAB.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 8.4 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (23). In contrast, an adverse CO concentration, known as a "hot spot," would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph)—or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (24). Traffic volumes generating the CO concentrations for the "hot spot" analysis is shown on Table 8. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vph and AM/PM traffic volumes of 8,062 vph and 7,719 vph respectively (25).

TABLE 8: CO MODEL RESULTS

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Boulevard/Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard/Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Boulevard/Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard/Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

AIR QUALITY IMPACTS – CONSISTENCY WITH THRESHOLD NO. 4

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

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations

- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required (26).

PROJECT GHG ANALYSIS

CLIMATE CHANGE SETTING

Global climate change (GCC) is the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Project evaluated in this memo cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, this memo will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO₂, N₂O, CH₄, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere,

but prevent radiative heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

For the purposes of this analysis, emissions of CO₂, CH₄, and N₂O were evaluated because these gases are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

REGULATORY SETTING

Executive Order S-3-05

Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Assembly Bill (AB) 32

The California State Legislature enacted AB 32, which requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. GHGs, as defined under AB 32, include CO₂, CH₄, N₂O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. CARB is the state agency charged with monitoring and regulating sources of GHGs. Pursuant to AB 32, CARB adopted regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 states the following:

"Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems."

CARB approved the 1990 GHG emissions level of 427 million metric ton of CO₂ equivalent per year (MMTCO₂e) on December 6, 2007 (27). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO₂e. Emissions in 2020 in a “business as usual” (BAU) scenario were estimated to be 596 MMTCO₂e, which do not account for reductions from AB 32 regulations (28). At that level, a 28.4% reduction was required to achieve the 427 MMTCO₂e 1990 inventory. In October 2010, CARB prepared an updated BAU 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 MMTCO₂e. Therefore, under the updated forecast, a 21.7% reduction from BAU is required to achieve 1990 levels (29).

Progress in Achieving AB 32 Targets and Remaining Reductions Required

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is shown in updated emission inventories prepared by CARB for 2000 through 2012 (30). The State has achieved the Executive Order S-3-05 target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target.

- 1990: 427 MMTCO₂e (AB 32 2020 target)
- 2000: 463 MMTCO₂e (an average 8% reduction needed to achieve 1990 base)
- 2010: 450 MMTCO₂e (an average 5% reduction needed to achieve 1990 base)

CARB has also made substantial progress in achieving its goal of achieving 1990 emissions levels by 2020. As described earlier in this section, CARB revised the 2020 BAU inventory forecast to account for new lower growth projections, which resulted in a new lower reduction from BAU to achieve the 1990 base. The previous reduction from 2020 BAU needed to achieve 1990 levels was 28.4% and the latest reduction from 2020 BAU is 21.7%.

- 2020: 545 MMTCO₂e BAU (an average 21.7% reduction from BAU needed to achieve 1990 base)

Senate Bill (SB) 32

On September 8, 2016, Governor Jerry Brown signed the SB 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature (31).

AB 197

A condition of approval for SB 32 was the passage of AB 197. AB 197 requires that CARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources. AB 197 also gives the California legislature more oversight over CARB through the addition of two legislatively appointed members to the CARB Board and the establishment a legislative committee to make recommendations about CARB programs to the legislature.

Executive Order B-55-18 and SB 100

Executive Order B-55-18 and SB 100. SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Under the existing RPS, 25% of retail sales are required to be from renewable sources by December 31, 2016, 33% by December 31, 2020, 40% by December 31, 2024, 45% by December 31, 2027, and 50% by December 31, 2030. SB 100 raises California's RPS requirement to 50% renewable resources target by December 31, 2026, and to achieve a 60% target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California Environmental Protection Agency (CalEPA), the Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

Title 24 California Code of Regulations (CCR)

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, industrial, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that was effective on January 1, 2023⁵. As construction of the Project is anticipated to be completed in 2025, the Project would be required to comply with the Title 24 standards in place at that time.

SCAQMD

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim

⁵ The 2022 California Green Building Standard Code will be published July 1, 2022.

CEQA GHG Significance Threshold that could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
 - o Residential and commercial land use: 3,000 metric ton of CO₂ equivalent (MTCO₂e/yr.)
 - o Industrial land use: 10,000 MTCO₂e/yr.
 - o Based on land use type: residential: 3,500 MTCO₂e/yr.; commercial: 1,400 MTCO₂e/yr.; or mixed use: 3,000 MTCO₂e/yr.
- Tier 4 has the following options:
 - o Option 1: Reduce Business-as-Usual (BAU) emissions by a certain percentage; this percentage is currently undefined.
 - o Option 2: Early implementation of applicable AB 32 Scoping Plan measures
 - o Option 3: 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO₂e per SP per year for projects and 6.6 MTCO₂e per SP per year for plans;
 - o Option 3, 2035 target: 3.0 MTCO₂e per SP per year for projects and 4.1 MTCO₂e per SP per year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's interim thresholds used the Executive Order S-3-05 year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO₂ concentrations at 450 ppm, thus stabilizing global climate.

SCAQMD only has authority over GHG emissions from development projects that include air quality permits. At this time, it is unknown if the Project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the Project requires a stationary permit, it would be subject to the applicable SCAQMD regulations.

SCAQMD Regulation XXVII, adopted in 2009 includes the following rules:

- Rule 2700 defines terms and post global warming potentials.
- Rule 2701, Southern California (SoCal) Climate Solutions Exchange, establishes a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program created a program to produce GHG emission reductions within the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

County of San Bernardino GHG Emissions Reduction Plan

The County of San Bernardino adopted a GHG Emissions Reduction Plan (Reduction Plan) in September 2011. The Reduction Plan contains further guidance on the County of San Bernardino's GHG Inventory reduction goals, policies, guidelines, and implementation programs. The purpose of the Reduction Plan is to provide guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County of San Bernardino (32). The Reduction Plan provided the GHG emissions inventory for the year 2007, and target for reducing GHG emissions 15% below 2007 levels by 2020. The County has implemented strategies to reduce its GHG emissions identified in the 2011 Reduction Plan, which has helped the County meet its 2020 GHG reduction targets. Since the adoption of County's Reduction Plan, the State has enacted new climate change regulations, most notably SB 32, which provides statewide targets to reduce GHG emissions to 40% below 1990 levels by 2030.

As part of the Reduction Plan, the County of San Bernardino published a GHG Development Review Process that specifies a two-step approach in quantifying GHG emissions. First, a screening threshold of 3,000 MTCO₂e/yr is used to determine if additional analysis is required. Projects that exceed the 3,000 MTCO₂e/yr are required to either achieve a minimum 100 points per the Screening Tables or a 31% reduction over 2007 emissions levels. Consistent with CEQA guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions (33).

GHG IMPACTS

Standards of Significance

According to the *CEQA Guidelines* Appendix G thresholds, to determine whether impacts from GHG emissions are significant. Would the project:

- **Threshold 1:** Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

- **Threshold 2:** Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

The evaluation of an impact under CEQA requires measuring data from a project against both existing conditions and a “threshold of significance.” For establishing significance thresholds, the Office of Planning and Research’s amendments to the *CEQA Guidelines* Section 15064.7(c) state “[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.”

CEQA Guidelines Section 15064.4(a) further states, “. . . A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . . ; or (2) Rely on a qualitative analysis or performance-based standards.”

CEQA Guidelines Section 15064.4 provides that a lead agency should consider the following factors, among others, in assessing the significance of impacts from greenhouse gas emissions:

- **Consideration #1:** The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2:** Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3:** The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project’s incremental contribution of greenhouse gas emissions. In determining the significance of impacts, the lead agency may consider a project’s consistency with the State’s long-term climate goals or strategies, provided that substantial evidence supports the agency’s analysis of how those goals or strategies address the project’s incremental contribution to climate change and its conclusion that the project’s incremental contribution is not cumulatively considerable.

Discussion on Establishment of Significance Thresholds

The County of San Bernardino adopted the GHG Reduction Plan Update in June 2021. The GHG Reduction Plan Update provides guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County of San Bernardino (34). The County includes a GHG Development Review Process (DRP) that specifies a two-step approach in quantifying GHG emissions (34). First, a screening threshold of 3,000 MTCO₂e/yr is used to determine if additional analysis is required. Projects that exceed the 3,000 MTCO₂e/yr will be required to either achieve a minimum 100 points per the Screening Tables or a 31% reduction over 2007 emissions levels. Consistent with CEQA guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.

GHG IMPACTS – CONSISTENCY WITH THRESHOLD NO. 1

Would the Project have the potential to generate direct or indirect GHG emissions that would result in a significant impact on the environment?

PROJECT GHG EMISSIONS

The estimated GHG emissions for the Project land use are summarized on Table 9. The estimated GHG emission includes emissions from Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), and Refrigerants (R). As shown on Table 9, the Project would generate a total of approximately 278.76 MTCO₂e/yr. Detailed operation model outputs for the proposed Project are presented in Attachment A.

TABLE 9: TOTAL PROJECT GHG EMISSIONS

Source	Emission (MT/year)				
	CO ₂	CH ₄	N ₂ O	Refrigerants	Total CO ₂ e
Annual construction-related emissions amortized over 30 years	9.01	3.67E-04	7.70E-05	1.91E-04	9.04
Energy	267.55	0.03	0.00	0.00	269.10
Stationary	0.61	0.00	0.00	0.00	0.61
Total CO₂e (All Sources)	278.76				

The County of San Bernardino adopted the GHG Plan in September 2011 (updated June 2021), which provides guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County of San Bernardino (35). The County includes a GHG Development Review Process (DRP) that specifies a two-step approach in quantifying GHG emissions (33). First, a screening threshold of 3,000 MTCO₂e/yr is used to determine if additional analysis is required. Projects that exceed the 3,000 MTCO₂e/yr will be required to either achieve a minimum 100 points per the Screening Tables or a 31% reduction over 2007 emissions levels. Consistent with CEQA guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.

The Project would result in approximately 278.76 MTCO₂e/yr.; the proposed Project would not exceed the SCAQMD's numeric threshold of 3,000 MTCO₂e/yr. Thus, the Project would result in a less than significant impact with respect to GHG emissions.

GHG IMPACTS – CONSISTENCY WITH THRESHOLD NO. 2

Would the Project have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?

Pursuant to 15604.4 of the *CEQA Guidelines*, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions (36).

CONSTRUCTION

40% below 1990 levels by 2030

By using newer and electrified construction equipment as it is phased in pursuant to requirements under AB 197 and similar law, policies and programs, the Project will be aligned with applicable plans and policies and would, therefore, not otherwise conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

This is consistent with SB 32's goal of reducing statewide emissions of greenhouse gases by 40% below 1990 levels by 2030.

85% below 1990 levels by 2045 / 2050

While construction activities associated with the implementation of the Project would result in emissions of CO₂ and CH₄ (see previous section regarding threshold 1, most of the emissions will come from the burning of fossil fuel in construction equipment. These emissions from construction equipment will decrease even more as emissions technology improves in the next 20 years. Additionally, it is likely that diesel equipment will be cleaner and more efficient, powered by renewable diesel, and/or phased out due to local Climate Action Plans and state requirements (such by AB 197) by 2045. Newer electrified construction equipment will also become more broadly available, further decreasing construction emissions.

This is consistent with AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045 and, by extension, Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050.

OPERATIONS

40% below 1990 levels by 2030

Operational emissions are powered primarily by electricity, so the Project's GHG emissions will decline as renewable and carbon neutral energy sources make up a larger and larger percentage of power on the grid in compliance with state's plans, policies, and regulations.

This is consistent with SB 32's goal of reducing statewide emissions of greenhouse gases by 40% below 1990 levels by 2030.

85% below 1990 levels by 2045 / 2050

Operational emissions are powered primarily by electricity, so the Project's GHG emissions will decline as renewable and carbon neutral energy sources make up a larger and larger percentage of power on the grid in compliance with state's plans, policies, and regulations.

Finally, the implementation of the Project will increase local water supplies, thereby avoiding the need to import water from remote sources. By reducing the demand for importing water, which is energy intensive and generates GHG emissions, the Project will offset GHG emissions that would otherwise have occurred absent implementation of the Project.

This is consistent with AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045 and, by extension, Executive Order S-03-05's goal of reducing emissions to 80%

below 1990 levels by 2050. This is also consistent with CARB's 2022 Scoping Plan goals and objectives, which are based on compliance with AB 1279.

CONCLUSION

Results of the assessment indicate that the Project is not anticipated to result in a significant impact during construction or operational activities associated with air quality and greenhouse gases.

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ATTACHMENT A
CALEEMOD PROPOSED PROJECT EMISSIONS MODEL OUTPUTS

16124 - Running Springs Water District Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	16124 - Running Springs Water District
Construction Start Date	10/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	11.2
Location	34.21489689855433, -117.12515624070254
County	San Bernardino-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5152
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.24

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
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Other Asphalt Surfaces	1.15	1000sqft	0.03	0.00	0.00	—	—	Water Storage Reservoir
User Defined Industrial	0.18	User Defined Unit	0.00	0.00	0.00	—	—	Pump Station
Other Asphalt Surfaces	1.97	Acre	1.97	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.	2.62	2.26	15.6	19.7	0.03	0.62	0.16	0.78	0.57	0.04	0.61	—	3,438	3,438	0.14	0.03	0.65	3,452
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.61	2.26	19.6	19.5	0.03	1.08	2.25	3.34	1.00	0.95	1.95	—	3,423	3,423	0.14	0.03	0.02	3,437
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.82	0.68	5.71	6.46	0.01	0.21	0.06	0.22	0.20	0.02	0.20	—	1,200	1,200	0.05	0.01	0.03	1,204
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.15	0.12	1.04	1.18	< 0.005	0.04	0.01	0.04	0.04	< 0.005	0.04	—	199	199	0.01	< 0.005	< 0.005	199

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.62	2.26	15.6	19.7	0.03	0.62	0.16	0.78	0.57	0.04	0.61	—	3,438	3,438	0.14	0.03	0.65	3,452
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.56	2.15	19.6	17.7	0.02	1.08	2.25	3.34	1.00	0.95	1.95	—	2,794	2,794	0.12	0.03	0.02	2,806
2025	2.61	2.26	15.6	19.5	0.03	0.62	0.16	0.78	0.57	0.04	0.61	—	3,423	3,423	0.14	0.03	0.02	3,437
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.33	0.27	2.44	2.55	< 0.005	0.11	0.06	0.17	0.10	0.02	0.12	—	433	433	0.02	< 0.005	0.03	435
2025	0.82	0.68	5.71	6.46	0.01	0.21	0.01	0.22	0.20	< 0.005	0.20	—	1,200	1,200	0.05	0.01	0.01	1,204
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.45	0.46	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	71.8	71.8	< 0.005	< 0.005	< 0.005	72.0
2025	0.15	0.12	1.04	1.18	< 0.005	0.04	< 0.005	0.04	0.04	< 0.005	0.04	—	199	199	0.01	< 0.005	< 0.005	199

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.03	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	1,619	1,619	0.15	0.02	0.00	1,629
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.01	0.01	0.03	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	1,619	1,619	0.15	0.02	0.00	1,629
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.04	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	1,620	1,620	0.15	0.02	0.00	1,629
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	268	268	0.03	< 0.005	0.00	270

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,616	1,616	0.15	0.02	—	1,625
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Stationar y	0.01	0.01	0.03	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	3.36	3.36	< 0.005	< 0.005	0.00	3.37
Total	0.01	0.01	0.03	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	1,619	1,619	0.15	0.02	0.00	1,629
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,616	1,616	0.15	0.02	—	1,625

Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Stationary	0.01	0.01	0.03	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	3.36	3.36	< 0.005	< 0.005	0.00	3.37
Total	0.01	0.01	0.03	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	1,619	1,619	0.15	0.02	0.00	1,629
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,616	1,616	0.15	0.02	—	1,625
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Stationary	0.01	0.01	0.04	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	3.68	3.68	< 0.005	< 0.005	0.00	3.69
Total	0.01	0.01	0.04	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	1,620	1,620	0.15	0.02	0.00	1,629
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	268	268	0.03	< 0.005	—	269
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Stationary	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.61	0.61	< 0.005	< 0.005	0.00	0.61
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	268	268	0.03	< 0.005	0.00	270

3. Construction Emissions Details

3.1. Demolition (2024) - 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	1.92	1.61	15.6	16.0	0.02	0.67	—	0.67	0.62	—	0.62	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.98	1.01	< 0.005	0.04	—	0.04	0.04	—	0.04	—	157	157	0.01	< 0.005	—	158
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.0	26.0	< 0.005	< 0.005	—	26.1
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.80	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	165	165	0.01	0.01	0.02	167
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	< 0.005	12.9
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	—	10.5	10.5	< 0.005	< 0.005	0.02	10.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.77	0.77	< 0.005	< 0.005	< 0.005	0.81
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.75	1.75	< 0.005	< 0.005	< 0.005	1.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13

3.3. Site Preparation (2024) - 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	2.11	1.77	16.6	14.6	0.02	0.87	—	0.87	0.80	—	0.80	—	2,294	2,294	0.09	0.02	—	2,302
Dust From Material Movement	—	—	—	—	—	—	1.98	1.98	—	0.91	0.91	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.12	< 0.005	0.01	—	0.01	0.01	—	0.01	—	18.9	18.9	< 0.005	< 0.005	—	18.9
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.12	3.12	< 0.005	< 0.005	—	3.13
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	99.0	99.0	< 0.005	< 0.005	0.01	100
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.84
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - 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	2.50	2.10	19.5	17.1	0.02	1.08	—	1.08	1.00	—	1.00	—	2,643	2,643	0.11	0.02	—	2,652

Dust From Material Movement	—	—	—	—	—	—	2.12	2.12	—	0.92	0.92	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.27	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.99	5.99	< 0.005	< 0.005	—	6.01
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.06	0.64	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	132	132	0.01	< 0.005	0.01	134
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	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	19.0	19.0	< 0.005	< 0.005	< 0.005	19.9

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.83	1.83	< 0.005	< 0.005	< 0.005	1.86
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.05

3.7. Building Construction (2024) - 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	1.54	1.28	10.9	11.6	0.02	0.44	—	0.44	0.40	—	0.40	—	2,159	2,159	0.09	0.02	—	2,167
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	0.15	0.12	1.05	1.12	< 0.005	0.04	—	0.04	0.04	—	0.04	—	207	207	0.01	< 0.005	—	208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.02	0.19	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.3	34.3	< 0.005	< 0.005	—	34.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.45	1.21	10.3	11.6	0.02	0.39	—	0.39	0.35	—	0.35	—	2,160	2,160	0.09	0.02	—	2,167
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	1.45	1.21	10.3	11.6	0.02	0.39	—	0.39	0.35	—	0.35	—	2,160	2,160	0.09	0.02	—	2,167
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	0.78	0.65	5.53	6.19	0.01	0.21	—	0.21	0.19	—	0.19	—	1,158	1,158	0.05	0.01	—	1,162
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.01	1.13	< 0.005	0.04	—	0.04	0.03	—	0.03	—	192	192	0.01	< 0.005	—	192
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

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

3.11. Paving (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.24	7.22	0.01	0.23	—	0.23	0.21	—	0.21	—	1,102	1,102	0.04	0.01	—	1,106
Paving	0.44	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.24	7.22	0.01	0.23	—	0.23	0.21	—	0.21	—	1,102	1,102	0.04	0.01	—	1,106
Paving	0.44	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.2	36.2	< 0.005	< 0.005	—	36.4
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.00	6.00	< 0.005	< 0.005	—	6.02
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.97	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	176	176	0.01	0.01	0.65	179
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.73	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	161	161	0.01	0.01	0.02	164

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	—	5.38	5.38	< 0.005	< 0.005	0.01	5.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.89	0.89	< 0.005	< 0.005	< 0.005	0.90
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

undefined	—	—	—	—	—	—	—	—	—	—	—	—	1,616	1,616	0.15	0.02	—	1,625
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,616	1,616	0.15	0.02	—	1,625
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
undefined d	—	—	—	—	—	—	—	—	—	—	—	—	1,616	1,616	0.15	0.02	—	1,625
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,616	1,616	0.15	0.02	—	1,625
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
undefined d	—	—	—	—	—	—	—	—	—	—	—	—	268	268	0.03	< 0.005	—	269
Total	—	—	—	—	—	—	—	—	—	—	—	—	268	268	0.03	< 0.005	—	269

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

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

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pumps	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pumps	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pumps	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.01	0.01	0.03	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	3.36	3.36	< 0.005	< 0.005	0.00	3.37
Total	0.01	0.01	0.03	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	3.36	3.36	< 0.005	< 0.005	0.00	3.37
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.01	0.01	0.03	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	3.36	3.36	< 0.005	< 0.005	0.00	3.37
Total	0.01	0.01	0.03	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	3.36	3.36	< 0.005	< 0.005	0.00	3.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.61	0.61	< 0.005	< 0.005	0.00	0.61

Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.61	0.61	< 0.005	< 0.005	0.00	0.61
-------	---------	---------	------	------	---------	---------	------	---------	---------	------	---------	------	------	------	---------	---------	------	------

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Demolition	Demolition	10/1/2024	10/31/2024	5.00	23.0	20
Site Preparation	Site Preparation	11/1/2024	11/5/2024	5.00	3.00	2
Grading	Grading	11/6/2024	11/12/2024	5.00	5.00	4
Building Construction	Building Construction	11/13/2024	10/1/2025	5.00	231	200
Paving	Paving	9/16/2025	10/1/2025	5.00	12.0	10

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
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20

Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	0.17	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2

Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	1.00	5.00	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
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5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	343	—

Site Preparation	—	—	4.50	0.00	—
Grading	—	40.0	10.0	0.00	—
Paving	0.00	0.00	0.00	0.00	2.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	0.03	100%
User Defined Industrial	0.00	0%
Other Asphalt Surfaces	1.97	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	5,218

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Asphalt Surfaces	0.00	—
User Defined Industrial	0.00	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Pumps	Electric	Average	1.00	24.0	350	0.74

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.00	0.50	200	8.00	0.73

5.16.2. Process Boilers

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

Equipment Type	Fuel Type
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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
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	26.4	annual days of extreme heat
Extreme Precipitation	13.6	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	42.0	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	100
AQ-PM	47.2
AQ-DPM	4.68
Drinking Water	72.6
Lead Risk Housing	40.1
Pesticides	30.2
Toxic Releases	43.3
Traffic	7.01
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	30.9
Haz Waste Facilities/Generators	16.6
Impaired Water Bodies	66.7
Solid Waste	77.6
Sensitive Population	—
Asthma	54.3
Cardio-vascular	85.0
Low Birth Weights	87.2
Socioeconomic Factor Indicators	—
Education	27.2
Housing	38.1
Linguistic	4.59
Poverty	62.6

Unemployment	72.5
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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	55.98614141
Employed	20.23610933
Median HI	59.48928526
Education	—
Bachelor's or higher	49.0183498
High school enrollment	100
Preschool enrollment	24.1498781
Transportation	—
Auto Access	56.16578981
Active commuting	27.97382266
Social	—
2-parent households	95.00834082
Voting	84.25510073
Neighborhood	—
Alcohol availability	58.71936353
Park access	62.17117926
Retail density	32.20839215
Supermarket access	39.02219941
Tree canopy	94.79019633
Housing	—
Homeownership	68.76684204

Housing habitability	74.68240729
Low-inc homeowner severe housing cost burden	68.84383421
Low-inc renter severe housing cost burden	90.00384961
Uncrowded housing	43.53907353
Health Outcomes	—
Insured adults	27.4990376
Arthritis	0.0
Asthma ER Admissions	44.7
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	28.8
Cognitively Disabled	25.4
Physically Disabled	38.4
Heart Attack ER Admissions	63.5
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0

No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	92.5
SLR Inundation Area	0.0
Children	82.0
Elderly	26.8
English Speaking	63.4
Foreign-born	6.5
Outdoor Workers	30.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	95.1
Traffic Density	10.8
Traffic Access	23.0
Other Indices	—
Hardship	33.8
Other Decision Support	—
2016 Voting	87.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	60.0
Healthy Places Index Score for Project Location (b)	52.0
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
Characteristics: Project Details	Taken from client data.
Construction: Construction Phases	Building Construction and Paving overlap to present a conservative analysis. Construction schedule expanded to account for 12-month construction schedule duration.
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases. Standard 8 hours work days.
Construction: Trips and VMT	Per client data, grading quantities will be hauled off-site and transported within less than 5 miles.
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Project not anticipated to generate substantive amount of trips.
Operations: Consumer Products	Building use is for a water reservoir and pump station. As such, the CalEEMod defaults for the land use modeled are not appropriate .
Operations: Landscape Equipment	Project does not anticipate landscaping.
Operations: Off-Road Equipment	Based on similar projects

APPENDIX 2

BIOLOGICAL RESOURCES ASSESSMENT

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August 11, 2023

Tom Dodson & Associates
Attn: Tom Dodson
2150 North Arrowhead Avenue
San Bernardino, California 92405

RE: BIOLOGICAL RESOURCES ASSESSMENT FOR THE RUNNING SPRINGS WATER DISTRICT
HOLLYMONT RESERVOIR PROJECT, IN THE UNINCORPORATED TOWN OF RUNNING SPRINGS, SAN
BERNARDINO COUNTY, CALIFORNIA

Dear Mr. Dodson,

Jennings Environmental was retained by Tom Dodson & Associates (TDA) to conduct a Biological Resources Assessment for the Running Springs Water District (RSWD) Hollymont Reservoir project (Project). The survey identified vegetation communities, the potential for the occurrence of special status species, or habitats that could support special status wildlife species, and recorded all plants and animals observed or detected within the Project boundary. This biological resources assessment is designed to address the potential effects of the proposed project on designated critical habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) or species designated as sensitive by the California Department of Fish and Wildlife (CDFW) or the California Native Plant Society (CNPS). Information contained in this document is in accordance with accepted scientific and technical standards that are consistent with the requirements of the United States Fish and Wildlife Service (USFWS) and (CDFW). Additionally, the site was surveyed for any drainage features that would meet the definition of the Waters of the US (WOUS), Waters of the State (WOS), or CDFW jurisdiction.

Project Description and Location

The proposed Project is to demolish and replace an existing 0.10-million-gallon (MG) reservoir. Additional improvements include the removal and relocation of the pump house, removal and replacement of concrete footings/slab, and replacement of associated water infrastructure for the reservoir. The Project site is located within Assessor Parcel Numbers (APNs) 0328-201-05 and 06, adjacent to Outer Highway 18 South. More specifically the site is located 0.06 miles southwest of the intersection of Outer Highway South and All View Dr. The Project is generally located in Section 31, Township 2 North, Range 2 West, and is depicted on the *Harrison Mountain* U.S. Geological Survey's (USGS) 7.5-minute topographic map. The site is surrounded by residential and commercial developments. Figures 1 and 2, in Attachment A, depict the site location.

Methods

Prior to performing the updated field survey, existing documentation relevant to the Project site was reviewed. The most recent records of the California Natural Diversity Database (CNDDDB) managed by CDFW (CDFW 2023), the USFWS Critical Habitat Mapper (USFWS 2023), and the California Native Plant Society's Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California (CNPS 2023) were reviewed for the following quadrangles containing and surrounding the Project site: *Keller Peak and Harrison Mtn.* USGS 7.5-minute quadrangles. The *Keller Peak* quad was included in this search due to the site's proximity to its border. These databases contain records of reported occurrences of federal- or state-listed endangered or threatened species, California Species of Concern (SSC), or otherwise special status species or habitats that may occur within or in the immediate vicinity of the Project site.

Jennings biologist, Gene Jennings, conducted the general reconnaissance survey within the Project site to identify the potential for the occurrence of special status species, vegetation communities, or habitats that could support special status wildlife species. The surveys were conducted on foot, throughout the Project site between 0800 and 0900 hours on July 17, 2023. Weather conditions during the survey included temperatures ranging from 78.2 to 79.3 degrees Fahrenheit, with clear skies, no precipitation, and 0 to 1.8 mile-per-hour winds. Photographs of the Project site were taken to document existing conditions and are included in Attachment B.

Results

CNDDDB Results

According to the CNDDDB, CNPSEI, and other relevant literature and databases, 55 sensitive species, 15 of which are listed as threatened or endangered, and 3 sensitive habitats, have been documented in the *Keller Peak and Harrison Mtn.* quads. This list of sensitive species and habitats includes any State and/or federally-listed threatened or endangered species, CDFW-designated Species of Special Concern (SSC), and otherwise Special Animals. "Special Animals" is a general term that refers to all of the taxa the CNDDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special status species." The CDFW considers the taxa on this list to be those of greatest conservation need.

An analysis of the likelihood of the occurrence of all CNDDDB-sensitive species documented in the *Keller Peak and Harrison Mtn.* quads are provided in Table 1, in Attachment C. This analysis takes into account species range as well as documentation within the vicinity of the project area and includes the habitat requirements for each species and the potential for their occurrence on the site, based on required habitat elements and range relative to the current site conditions. According to the databases, no sensitive habitat, including USFWS-designated critical habitat, occurs within or adjacent to the project site.

Designated Critical Habitat and Habitat Conservation Plans (HCPs)

The site is not located within or adjacent to any USFWS-designated Critical Habitat or Habitat Conservation Plan. According to the California Essential Habitat Connectivity Project Mapper, the site is located in a moderate to high permeable area for wildlife. However, the proposed Project would not affect the ability of wildlife to move around the area as it is for a replacement of an existing reservoir within an existing residential neighborhood. As such, no further action is required.

Special Status Species Background

Southern rubber boa (Charina umbratica) – Threatened (State)

The State-listed as threatened southern rubber boa (rubber boa) is a small, rather stout-bodied snake with smooth scales and a blunt head and tail (Stewart et al. 2005). Adults grow to about 49.5-55.9 cm in length. Adults are light brown or tan in dorsal color with an unmarked yellow venter; juveniles are pale without a distinct margin between dorsal and ventral coloration (Stewart et al. 2005). Rubber boas are primarily fossorial and are rarely encountered on the surface, except on days and nights of high humidity and overcast sky. During warm months, it is active at night and on overcast days. It hibernates during winter, usually in crevices in rocky outcrops. Other potential hibernacula may be rotting stumps.

Typical habitat for this species is mixed conifer-oak forest or woodland dominated by two or more of the following species: Jeffrey pine (*Pinus jeffreyi*), yellow pine (*P. ponderosa*), sugar pine (*P. lambertiana*), incense cedar (*Calocedrus decurrens*), white fir (*Abies concolor*), and black oak (*Quercus kelloggii*) (Stewart et al., 2005). Rubber boas are usually found near streams or wet meadows or within or under surface objects with good moisture retaining properties such as rotting logs (CDFW 2014). Much of the literature suggests that the rubber boa prefers mixed conifer-oak forests and woodlands between 5,000 and 8,000 feet in elevation, especially in canyons and on cool, north facing slopes (CDFW 1987). However, the factors of overriding importance seem to be access to hibernation sites below the frost line and access to damp soil (Keasler 1982).

Findings: Rubber boa have been documented within approximately 5 miles of the Project site. However, the Project site does not contain any suitable habitat for this species. The Project site does not contain any fallen debris for hibernacula and there are no south-facing slopes to provide any rock outcrops. The site is also separated from the occupied habitat by multiple development projects. Therefore, this species is considered absent from the Project site and the proposed Project will not affect rubber boa.

Bald eagle (Haliaeetus leucocephalus) – Delisted (Federal)/ Endangered (State)

The bald eagle (BAEA) was a federally-listed species until 2007 when it was delisted because of the increase in population. However, it remains a State-listed endangered species and is covered under the Migratory Bird Treaty Act (MBTA). BAEA are distinguished by a white head and white tail feathers, are powerful, brown birds that may weigh 14 pounds and have a wingspan of 8 feet. Male eagles are smaller, weighing as much as 10 pounds and have a wingspan of 6 feet. Sometimes confused with Golden Eagles, BAEA are mostly dark brown until they are four to five years old and acquire their characteristic coloring. They live near rivers, lakes, and marshes where they can find fish, their staple food. BAEA will also feed on waterfowl, turtles, rabbits, snakes, and other small animals and carrion. BAEA require a good food base, perching areas, and nesting sites. Their habitat includes estuaries, large lakes, reservoirs, rivers, and some seacoasts (CDFW 2016). In winter, the birds congregate near open water in tall trees for spotting prey and night roosts for sheltering (CDFW 1999). They mate for life, choosing the tops of large trees to build nests, which they typically use and enlarge each year. In most of California, the breeding season lasts from about January through July or August (CDFW 2016). Nests may reach 10 feet across and weigh a half ton. They may also have one or more alternate nests within their breeding territory (CDFW 2016). The young eagles are flying within three months and are on their own about a month later.

Findings: The Project is not within or adjacent to any suitable BAEA foraging or nesting habitat. The nearest suitable habitat for this species is the Lake Arrowhead shoreline, which is approximately 2.91-miles northwest of the Project site. Therefore, the proposed project will not affect BAEA and no further investigation relative to this species is warranted or required.

California spotted owl (*Strix occidentalis*) – SSC

The California spotted owl (SPOW) is considered a SSC by the CDFW and is listed as a Sensitive Species by the U.S. Forest Service. The SPOW breeds and roosts in forests and woodlands with large old trees and snags, high basal areas of trees and snags, dense canopies ($\geq 70\%$ canopy closure), multiple canopy layers, and downed woody debris (Verner et al. 1992a, as cited in Davis and Gould 2008). Large, old trees are the key component; they provide nest sites and cover from inclement weather and add structure to the forest canopy and woody debris to the forest floor. These characteristics typify old-growth or late-seral-stage habitats (Davis and Gould 2008). Because the SPOW selects stands that have higher structural diversity and significantly more large trees than those generally available, it is considered a habitat specialist (Moen and Gutiérrez 1997, as cited in Davis and Gould 2008). In southern California, SPOW principally occupy montane hardwood and montane hard-wood-conifer forests, especially those with canyon live oak (*Quercus chrysolepis*) and bigcone Douglas-fir (*Pseudotsuga macrocarpa*), at mid- to high elevations (Davis and Gould 2008).

SPOW prey on small mammals, particularly dusky-footed woodrats (*Neotoma fuscipes*) at lower elevations (oak woodlands and riparian forests) and throughout southern California (Verner et al. 1992a, as cited in Davis and Gould 2008). The SPOW breeding season occurs from early spring to late summer or fall. Breeding spotted owls begin pre-laying behaviors, such as preening and roosting together, in February or March and juvenile owl dispersal likely occurs in September and October (Meyer 2007). The SPOW does not build its own nest but depends on finding suitable, naturally occurring sites in tree cavities or on broken-topped trees or snags, on abandoned raptor or common raven (*Corvus corax*) nests, squirrel nests, dwarf mistletoe (*Arceuthobium* spp.) brooms, or debris accumulations in trees (Davis and Gould 2008). In the San Bernardino Mountains, platform nests predominate (59%) and were in trees with an average diameter at breast height (dbh) of 75 cm, whereas cavity nest trees and broken-top nest trees were significantly larger (mean dbh of 108.3 cm and 122.3 cm, respectively) (LaHaye et al. 1997, as cited in Davis and Gould 2008).

According to LaHaye and Gutierrez (2005), urbanization in the form of primary and vacation homes has degraded or consumed some forest in most mountain ranges. The results of spotted owl surveys conducted between 1987 and 1998 in the San Bernardino Mountains indicated that a large area of potentially-suitable spotted owl habitat, enough to support 10-15 pairs, existed between Running Springs and Crestline (LaHaye and others 1999, as cited in LaHaye and Gutierrez 2005). However, only four pairs have been found in this area, and owls were found only in undeveloped sites. Thus, residential development within montane forests may preclude spotted owl occupancy, even when closed-canopy forest remains on developed sites (LaHaye and Gutierrez 2005).

Findings: *Per the CNDDDB Spotted Owl Observations Database (2023), the nearest documented SPOW activity center (roosting or nesting site) is approximately 0.51 miles southwest of the Project site. The Project site is within an already disturbed area and the immediate vicinity has been subject to ongoing human disturbances associated with the existing residential developments in the area for a long time. Therefore, it is unlikely that the immediate surrounding area would be utilized by SPOW for nesting or roosting. Additionally, the Project site lacks the basic habitat requirements for this species. Furthermore, this species has not been documented within the project area. Although the U.S. Forest Service does not survey for SPOW on private property, the surrounding San Bernardino National Forest areas have been surveyed extensively by the Forest Service since the late 1980s. For the reasons discussed, the Project area is not occupied by SPOW, and the proposed Project will not affect this species.*

San Bernardino flying squirrel (*Glaucomys oregonensis californicus*) – SSC

The San Bernardino flying squirrel (flying squirrel) is considered a SSC by the CDFW and is listed as a Sensitive Species by the U.S. Forest Service. The flying squirrel is a nocturnally active, arboreal squirrel that is distinguished by the furred membranes extending from wrist to ankle that allow squirrels to glide through the air between trees at distances up to 91 meters (300 feet) (Wolf 2010). The San Bernardino flying squirrel is the most southerly distributed subspecies of northern flying squirrel (*Glaucomys sabrinus*) and is paler in color and smaller than most other northern flying squirrel subspecies. It inhabits high-elevation mixed conifer forests comprised of white fir, Jeffrey pine, and black oak between ~4,000 to 8,500 feet. It has specific habitat requirements that include associations with mature forests, large trees and snags, closed canopy, downed woody debris, and riparian areas, and it is sensitive to habitat fragmentation. It specializes in eating truffles (e.g. hypogeous mycorrhizal sporocarps) buried in the forest floor as well as arboreal lichens in winter when truffles are covered with snow and unavailable (Wolf 2010). This flying squirrel historically occurred as three isolated populations in the San Gabriel, San Bernardino, and San Jacinto mountain forests.

Flying squirrel populations are adversely affected by habitat fragmentation. Rosenberg and Raphael (1984) found that in northwestern California, the abundance of squirrels increased with stand size, they were generally absent in stands smaller than 20 hectares (ha), and approximately 75% of stands over 100 ha had flying squirrels. An additional problem with fragmented habitats is the constraints that open spaces pose to the movements of individuals and the colonization of unoccupied habitat patches. Mowrey and Zasada (1982) reported an average gliding distance of about 20 meters in *sabrinus*, with a maximum of 48 meters, and concluded that movements are unimpeded in areas with average openings of 20 meters and occasional openings of 30 to 40 meters.

Findings: *The Flying Squirrels of Southern California is a project of the San Diego Natural History Museum (SDNHM), in collaboration with the U.S. Forest Service and the USFWS, to try to determine the distribution and habitat use of the flying squirrel in southern California. Per the SDNHM database, the nearest documented flying squirrel occurrence (2015) is located 0.10-miles northeast of the Project site, within a more dense tree canopy area. The Project site and surrounding area does not provide habitat suitable to support flying squirrel. The surrounding area consists of residential development with sparse tree canopy cover. Although, this species has been documented within approximately 0.10-miles of the Project site, in mixed conifer forest habitat. The habitat within the Project site and surrounding vicinity is not suitable to support flying squirrel and the proposed Project would not result in impacts to this species. Therefore, the proposed Project will not have an effect on this species.*

Habitat and Wildlife

The habitat on-site consists of an existing disturbed parcel with two existing reservoirs and associated infrastructure. Plant species observed in the vicinity include; Jeffery pine (*Pinus jeffreyi*), incense cedar (*Calocedrus decurrens*), Mexican manzanita (*Arctostaphylos pungens*), douglas fir (*Pseudotsuga menziesii*), California black oak (*Quercus kelloggii*), common woolly sunflower (*Eriophyllum lanatum*), silver lupin (*Lupinus albifrons*), ponderosa pine (*Pinus ponderosa*), sweet pea (*Lathyrus odoratus*), and sticky cinquefoil (*Drymocallis glandulosa*).

Animal species observed or otherwise detected on or in the vicinity of the Project site during the surveys included; common raven (*Corvus corax*), Steller's jay (*Cyanocitta stelleri*), acorn woodpecker

(*Melanerpes formicivorus*), mountain chickadee (*Poecile gambeli*), American robin (*Turdus migratorius*), and mourning dove (*Zenaida macroura*).

The project site is located within a developed portion of the unincorporated town of Running Springs. As mentioned above the site is within a residential neighborhood and is subject to ongoing maintenance as it is an existing reservoir site. As such the site offers no habitat for any listed species.

Jurisdictional Delineation

Waters of the United States and Waters of the State

The USACE has the authority to permit the discharge of dredged or fill material in Waters of the U.S. (WOUS) under Section 404 CWA. While the Regional Water Quality Board has authority over the discharge of dredged or fill material in Waters of the State under Section 401 CWA as well as the Porter-Cologne Water Quality Control Act. The Project area was surveyed with 100 percent visual coverage and no drainage features were present on site that met the definition for WOUS. As such, the subject parcel does not contain any wetlands, Waters of the U.S., or Waters of the State.

Fish and Game Code Section 1602 - State Lake and/or Streambed

The CDFW asserts jurisdiction over any drainage feature that contains a definable bed and bank or associated riparian vegetation. The Project area was surveyed with 100 percent visual coverage and no definable bed or bank features exist on the project site. As such, the subject parcel does not contain any areas under CDFW jurisdiction.

Conclusions and Recommendations

Based on the literature review and personal observations made in the immediate vicinity, no State and/or federally-listed threatened or endangered species are documented/or expected to occur within the Project site. Additionally, no plant species with the California Rare Plant Rank (CRPR) of 1 or 2 were observed on-site or documented to occur on-site in the relevant databases. No other sensitive species were observed within the project area or buffer area.

The Project site is highly disturbed. The Project site is a maintained reservoir site within an existing residential neighborhood. The site offers no suitable habitat for any sensitive species. Therefore, no further surveys are required.

Jurisdictional Features

There are no streams, channels, washes, or swales that meet the definitions of Section 1600 of the State of California Fish and Game Code (FGC) under the jurisdiction of the CDFW, Section 401 ("Waters of the State") of the Clean Water Act (CWA) under the jurisdiction of the Regional Water Quality Control Board (RWQCB), or "Waters of the United States" (WoUS) as defined by Section 404 of the CWA under the jurisdiction of the U.S. Army Corps of Engineers (Corps) within the subject parcel. Therefore, no permit from any regulatory agency will be required.

Nesting Birds

Since there is some habitat within the Project site and surrounding area that is suitable for nesting birds in general, the following mitigation measure should be implemented if any future construction is proposed:

Nesting bird nesting season generally extends from February 1 through September 15 in southern California and specifically, March 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist will conduct pre-construction Nesting Bird Surveys (NBS) prior to project-related disturbance to nestable vegetation to identify any active nests. If no active nests are found, no further action will be required. If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nests and buffer zones shall be field-checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

Certification

I hereby certify that the statements furnished herein, and in the attached exhibits present data and information required for this analysis to the best of my ability, and the facts, statements, and information presented are true and correct to the best of my knowledge and belief. This report was prepared in accordance with professional requirements and standards. Fieldwork conducted for this assessment was performed by me. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project proponent and that I have no financial interest in the project.

Please do not hesitate to contact me at 909-534-4547 should you have any questions or require further information.

Sincerely,



Gene Jennings
Principal/Regulatory Specialist

Attachments:

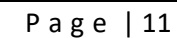
- Attachment A – Figures
- Attachment B – Site Photos
- Attachment C – Table 1

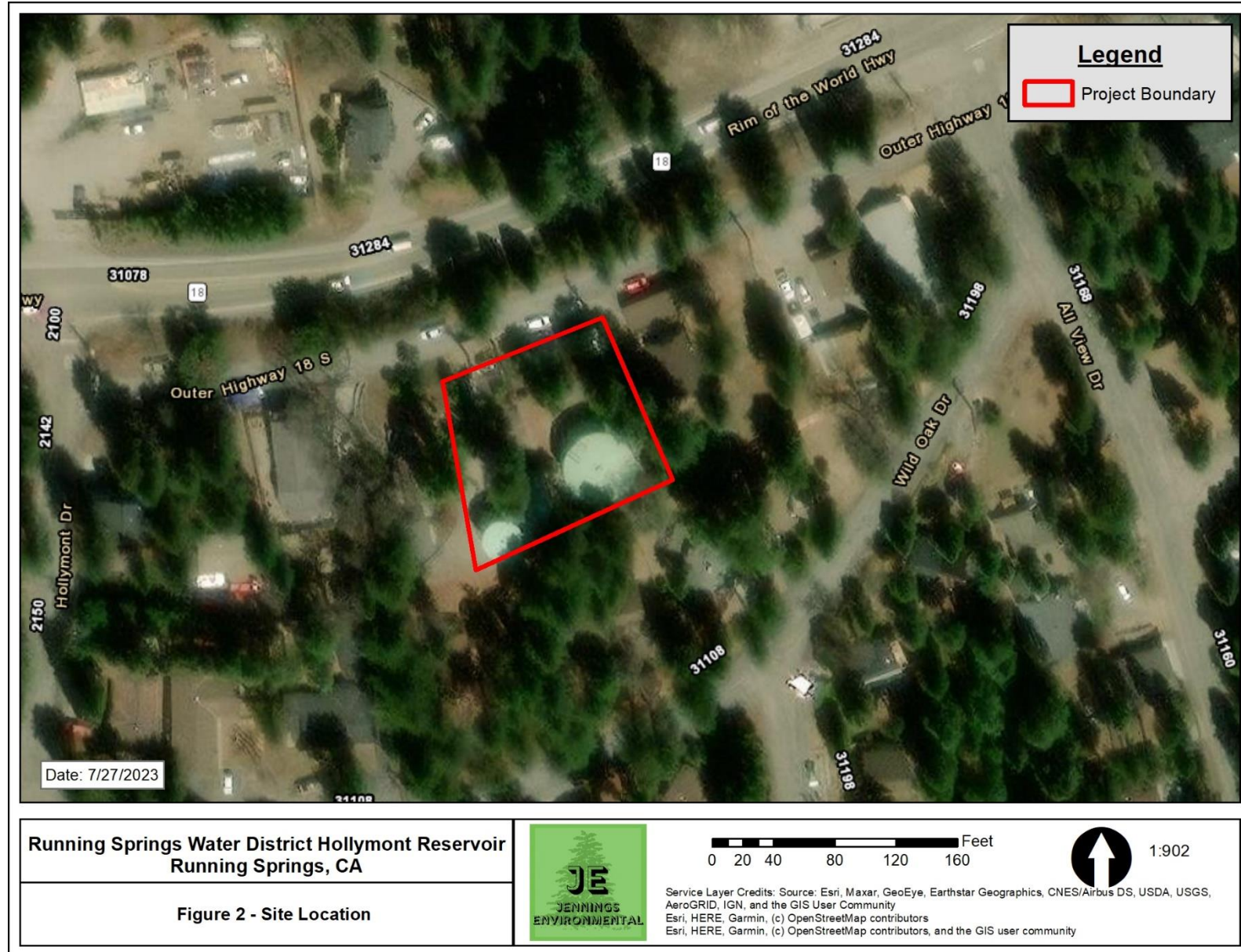
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Attachment A - Figures





Attachment B - Photos



Photo 1 –
Northwest
section of
parcel,
facing east.



Photo 2 –
Northeast
section of
parcel,
facing
southwest.



Photo 3 –
Southeast
section of
parcel,
facing
west.



Photo 4 –
Southeast
section of
parcel,
facing
north.

Attachment C – Table 1

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	None, None	G5T3, S3, CDFW-WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
<i>Allium howellii</i> var. <i>clokeyi</i>	Mt. Pinos onion	None, None	G4T2, S2, 1B.3	Great Basin scrub, pinyon and juniper woodland, meadows and seeps (edges). 1385-1800 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
<i>Anniella stebbinsi</i>	Southern California legless lizard	None, None	G3, S3, CDFW-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.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Arizona elegans occidentalis	California glossy snake	None, None	G5T2, S2, CDFW-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.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Aspidoscelis tigris stejnegeri	coastal whiptail	None, None	G5T5, S3, CDFW-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.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Berberis nevinii	Nevin's barberry	Endangered, Endangered	G1, S1, 1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub. On steep, N-facing slopes or in low grade sandy washes. 90-1590 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Bombus crotchii	Crotch bumble bee	None, Candidate Endangered	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.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
<i>Bombus morrisoni</i>	Morrison bumble bee	None, None	G3, S1S2	From the Sierra-Cascade ranges eastward across the intermountain west. Food plant genera include <i>Cirsium</i> , <i>Cleome</i> , <i>Helianthus</i> , <i>Lupinus</i> , <i>Chrysothamnus</i> , and <i>Melilotus</i> .	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Palmer's mariposa-lily	None, None	G3T2, S2, 1B.2	Meadows and seeps, chaparral, lower montane coniferous forest. Vernal moist places in yellow-pine forest, chaparral. 195-2530 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
<i>Calochortus plummerae</i>	Plummer's mariposa-lily	None, None	G4, S4, 4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Castilleja cinerea	ash-gray paintbrush	Threatened, None	G1G2, S1S2, 1B.2	Pebble plains, upper montane coniferous forest, Mojavean desert scrub, meadows and seeps, pinyon and juniper woodland. Endemic to the San Bernardino Mountains, in clay openings; often in meadow edges. 725-2860 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	None, None	G2?, S2?, 1B.2	Meadows and seeps, pebble plain, upper montane coniferous forest, chaparral, riparian woodland. Mesic to drying soils in open areas of stream and meadow margins or in vernal wet areas. 1140-2320 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Catostomus santaanae	Santa Ana sucker	Threatened, None	G1, S1	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Centromadia pungens ssp. laevis	smooth tarplant	None, None	G3G4T2, S2, 1B.1	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Charina umbratica	southern rubber boa	None, Threatened	G2G3, S2S3	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.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Chorizanthe parryi var. parryi	Parry's spineflower	None, None	G3T2, S2, 1B.1	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Threatened, Endangered	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.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Dipodomys merriami parvus	San Bernardino kangaroo rat	Endangered, Candidate Endangered	G5T1, S1, CDFW-SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Empidonax traillii extimus	southwestern willow flycatcher	Endangered, Endangered	G5T2, S1	Riparian woodlands in Southern California.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Endangered, Endangered	G4T1, S1, 1B.1	Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180-705 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Euchloe hyantis andrewsi	Andrew's marble butterfly	None, None	G4G5T1, S1	Inhabits yellow pine forest near Lake Arrowhead and Big Bear Lake, San Bernardino Mtns, San Bernardino Co, 5000-6000 ft. Hostplants are Streptanthus bernardinus and Arabis holboellii var pinetorum; larval foodplant is Descurainia richardsonii.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Eumops perotis californicus	western mastiff bat	None, None	G4G5T4, S3S4, CDFW-SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Glaucomys oregonensis californicus	San Bernardino flying squirrel	None, None	G5T1T2, S1S2, CDFW-SSC	Known from black oak or white fir dominated woodlands between 5200 - 8500 ft in the San Bernardino and San Jacinto ranges. May be extirpated from San Jacinto range. Needs cavities in trees/snags for nests and cover. Needs nearby water.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Haliaeetus leucocephalus	bald eagle	Delisted, Endangered	G5, S3, CDFW-FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Heuchera parishii	Parish's alumroot	None, None	G3, S3, 1B.3	Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest, alpine boulder and rock field. Rocky places. Sometimes on carbonate. 1340-3505 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Imperata brevifolia	California satintail	None, None	G3, S3, 2B.1	Coastal scrub, chaparral, riparian scrub, Mojavean desert scrub, meadows and seeps (alkali), riparian scrub. Mesic sites, alkali seeps, riparian areas. 3-1495 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Ivesia argyrocoma var. argyrocoma	silver-haired ivesia	None, None	G2T2, S2, 1B.2	Meadows and seeps, pebble plains, upper montane coniferous forest. In pebble plains and meadows with other rare plants. 1490-2960 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Lasiurus xanthinus	western yellow bat	None, None	G4G5, S3, CDFW-SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Lilium parryi	lemon lily	None, None	G3, S3, 1B.2	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. 625-2930 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Malacothamnus parishii	Parish's bush-mallow	None, None	GXQ, SX, 1A	Chaparral, coastal sage scrub. In a wash. 305-455 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Monardella macrantha ssp. hallii	Hall's monardella	None, None	G5T3, S3, 1B.3	Broadleafed upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley and foothill grassland. Dry slopes and ridges in openings. 700-1800 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Neotamias speciosus speciosus	lodgepole chipmunk	None, None	G4T3T4, S2	Summits of isolated Piute, San Bernardino, and San Jacinto mountains. Usually found in open-canopy forests. Habitat is usually lodgepole pine forests in the San Bernardino Mts and chinquapin slopes in the San Jacinto Mts.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Nyctinomops femorosaccus	pocketed free-tailed bat	None, None	G5, S3, CDFW-SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Oncorhynchus mykiss irideus pop. 10	steelhead - southern California DPS	Endangered, Candidate Endangered	G5T1Q, S1	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Packera bernardina	San Bernardino ragwort	None, None	G2, S2, 1B.2	Meadows and seeps, pebble plains, upper montane coniferous forest. Mesic, sometimes alkaline meadows, and dry rocky slopes. 1615-2470 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Perideridia parishii ssp. parishii	Parish's yampah	None, None	G4T3T4, S2, 2B.2	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. Damp meadows or along streambeds-prefers an open pine canopy. 1470-2530 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Perognathus alticola alticola	white-eared pocket mouse	None, None	G2TH, SH, CDFW-SSC	Ponderosa and Jeffrey pine habitats; also in mixed chaparral and sagebrush habitats in the San Bernardino Mountains. Burrows are constructed in loose soil.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Phrynosoma blainvillii	coast horned lizard	None, None	G3G4, S4, CDFW-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.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Rana draytonii	California red-legged frog	Threatened, None	G2G3, S2S3, CDFW-SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Rana muscosa	southern mountain yellow-legged frog	Endangered, Endangered	G1, S1	Disjunct populations known from southern Sierras (northern DPS) and San Gabriel, San Bernardino, and San Jacinto Mtns (southern DPS). Found at 1,000 to 12,000 ft in lakes and creeks that stem from springs and snowmelt. May overwinter under frozen lakes. Often encountered within a few feet of water. Tadpoles may require 2 - 4 yrs to complete their aquatic development.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Rhinichthys osculus ssp. 8	Santa Ana speckled dace	None, None	G5T1, S1, CDFW-SSC	Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Riversidian Alluvial Fan Sage Scrub	Riversidian Alluvial Fan Sage Scrub	None, None	G1, S1.1	Coastal scrub	This habitat type is absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
<i>Sidalcea malviflora</i> ssp. <i>dolosa</i>	Bear Valley checkerbloom	None, None	G5T2, S2, 1B.2	Meadows and seeps, riparian woodland, lower montane coniferous forest, upper montane coniferous forest. Known from wet areas within forested habitats. Affected by hydrological changes. 1575-2590 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	None, None	G4, S2, 2B.2	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes. 3-2380 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
<i>Sidalcea pedata</i>	bird-foot checkerbloom	Endangered, Endangered	G1, S1, 1B.1	Meadows and seeps, pebble plains. Vernal mesic sites in meadows or pebble plains. 1840-2305 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Southern Mixed Riparian Forest	Southern Mixed Riparian Forest	None, None	G2, S2.1	Riparian forest	This habitat type is absent from the Project site.
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland	None, None	G4, S4	Riparian woodland	This habitat type is absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Spea hammondii	western spadefoot	None, None	G2G3, S3S4, CDFW-SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Streptanthus bernardinus	Laguna Mountains jewelflower	None, None	G3G4, S3S4, 4.3	Chaparral, lower montane coniferous forest. Clay or decomposed granite soils; sometimes in disturbed areas such as streamsides or roadcuts. 1440-2500 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Streptanthus campestris	southern jewelflower	None, None	G3, S3, 1B.3	Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Open, rocky areas. 605-2590 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Symphotrichum defoliatum	San Bernardino aster	None, None	G2, S2, 1B.2	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Taxidea taxus	American badger	None, None	G5, S3, CDFW-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.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Thamnophis hammondi	two-striped gartersnake	None, None	G4, S3S4, CDFW-SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.
Thelypteris puberula var. sonorensis	Sonoran maiden fern	None, None	G5T3, S2, 2B.2	Meadows and seeps. Along streams, seepage areas. 60-930 m.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal/State Status</u>	<u>Other Status</u>	<u>Habitat</u>	<u>Potential to Occur</u>
Vireo bellii pusillus	least Bell's vireo	Endangered, Endangered	G5T2, S2	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	Suitable habitat for this species does not occur on site. As such, this species is considered absent from the Project site.

Coding and Terms

E = Endangered T = Threatened C = Candidate FP = Fully Protected WL = Watch List SSC = Species of Special Concern R = Rare

State Species of Special Concern: An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats. Raptor and owls are protected under section 3502.5 of the California Fish and Game code: “It is unlawful to take, possess or destroy any birds in the orders Falconiformes or Strigiformes or to take, possess or destroy the nest or eggs of any such bird.”

State Fully Protected: The classification of Fully Protected was the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Global Rankings (Species or Natural Community Level):

G1 = Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2 = Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.

G3 = Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.

G4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

G5 = Secure – Common; widespread and abundant.

? = Uncertainty in the exact status of an element (could move up or down one direction from current rank)

Subspecies Level: Taxa which are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies. For example: the Point Reyes mountain beaver, *Aplodontia rufa* ssp. *phaea* is ranked G5T2. The G-rank refers to the whole species range i.e., *Aplodontia rufa*. The T-rank refers only to the global condition of ssp. *phaea*.

State Ranking:

S1 = Critically Imperiled – Critically imperiled in the State because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.

S2 = Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.

S3 = Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.

S4 = Apparently Secure – Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.

S5 = Secure – Common, widespread, and abundant in the State.

California Rare Plant Rankings (CNPS List):

1A = Plants presumed extirpated in California and either rare or extinct elsewhere.

1B = Plants rare, threatened, or endangered in California and elsewhere.

2A = Plants presumed extirpated in California, but common elsewhere.

2B = Plants rare, threatened, or endangered in California, but more common elsewhere.

3 = Plants about which more information is needed; a review list.

4 = Plants of limited distribution; a watch list.

Threat Ranks:

.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

APPENDIX 3

CULTURAL RESOURCES

HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT

ROWCO RESERVOIRS AND BOOSTER REPLACEMENT PROJECT

**Assessor's Parcel Numbers 0328-201-05 and -06, Running Springs Area
San Bernardino County, California**

For Submittal to:

Running Springs Water District
31242 Hilltop Boulevard
P.O. Box 2206
Running Springs, CA 92382

Prepared for:

Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, CA 92405

Prepared by:

CRM TECH
1016 East Cooley Drive, Suite A/B
Colton, CA 92324

Bai "Tom" Tang, Principal Investigator
Michael Hogan, Principal Investigator

June 9, 2024
CRM TECH Contract No. 4103

Title: Historical/Archaeological Resources Survey Report: ROWCO Reservoirs and Booster Replacement Project, Assessor's Parcel Numbers 0328-201-05 and -06, Running Springs Area, San Bernardino County, California

Author(s): Bai "Tom" Tang, Principal Investigator/Historian
Frank Raslich, Archaeologist/Report Writer
Hunter O'Donnell, Archaeologist

Consulting Firm: CRM TECH
1016 East Cooley Drive, Suite A/B
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(909) 824-6400

Date: June 9, 2024

For Submittal to: Running Springs Water District
31242 Hilltop Boulevard
P.O. Box 2206
Running Springs, CA 92382
(909) 867-2766

Prepared for: Tom Dodson, President
Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, CA 92405
(909) 882-3612

Project Size: Approximately two acres

USGS Quadrangle: Keller Peak, Calif., 7.5' quadrangle (Section 31, T2N R2W, San Bernardino Baseline and Meridian)

Resource: Site 4103-1H*: three water reservoir tanks and structural footings, 1950s-1970s

** Temporary designations, pending assignment of permanent identification numbers in the California Historical Resources Inventor*

Keywords: Rim of the World communities, San Bernardino Mountains; Phase I cultural resources survey; no "historical resources" affected under CEQA

EXECUTIVE SUMMARY

Between February and June 2024, at the request of Tom Dodson & Associates, CRM TECH performed a cultural resources survey for the proposed ROWCO Reservoirs and Booster Replacement Project in the unincorporated Running Springs area of San Bernardino County, California. The subject property of the survey consists of Assessor's Parcel Numbers 0328-201-05 and -06, totaling approximately two acres. It is located on the south side of Outer Highway 18 South between Hollymont Drive and All View Drive, in the southeast quarter of Section 31, Township 2 North, Range 2 West, San Bernardino Baseline and Meridian, as depicted in the United States Geological Survey Keller Peak, California, 7.5' quadrangle.

The study is part of the environmental review process for the proposed project, which entails primarily the replacement of two existing 100,000-gallon bolted steel reservoirs with one new 300,000-gallon welded steel potable water storage reservoir. The project also includes the replacement and relocation of a pump/pressure reducing station into an 11x16-foot concrete block building and the installation of the necessary piping, pavement, and electric-control equipment. The Running Springs Water District (RSWD), as the lead agency for the project, required the study in compliance with the California Environmental Quality Act (CEQA).

The purpose of this study is to provide RSWD with the necessary information and analysis to determine whether the proposed project would cause substantial adverse changes to any "historical resources," as defined by CEQA, that may exist in or around the project area. In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, initiated a Native American Sacred Lands File search, pursued historical background research, and carried out an intensive-level field survey. As a result of these research procedures, the three existing reservoir tanks at the project site, originally constructed in the 1950s-1970s, and associated features were recorded into the California Historical Resources Inventory and designated temporarily as Site 4103-1H, pending the assignment of a permanent identification number.

As a common water storage facility that does not demonstrate a close association with any persons or events of recognized significance, special merits in design, construction, or aesthetics, or the potential for important historical/archaeological data, Site 4103-1H does not appear eligible for listing in the California Register of Historical Resources and thus does not meet CEQA's definition of a "historical resource." No other potential "historical resources" were encountered within the project area throughout the course of this study.

Based on these findings, CRM TECH recommends to RSWD a finding of *No Impact* regarding "historical resources." No other cultural resources investigations will be necessary for the project unless construction plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are discovered during earth-moving operations associated with the project, all work within 50 feet of the discovery should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

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INTRODUCTION

Between February and June 2024, at the request of Tom Dodson & Associates, CRM TECH performed a cultural resources survey for the proposed ROWCO Reservoirs and Booster Replacement Project in the unincorporated Running Springs area of San Bernardino County, California (Fig. 1). The subject property of the survey consists of Assessor's Parcel Numbers 0328-201-05 and -06, totaling approximately two acres. It is located on the south side of Outer Highway 18 South between Hollymont Drive and All View Drive, in the southeast quarter of Section 31, Township 2 North, Range 2 West, San Bernardino Baseline and Meridian, as depicted in the United States Geological Survey (USGS) Keller Peak, California, 7.5' quadrangle (Figs. 2. 3).

The study is part of the environmental review process for the proposed project, which entails primarily the replacement of two existing 100,000-gallon bolted steel reservoirs with one new 300,000-gallon welded steel potable water storage reservoir. The project also includes the replacement and relocation of a pump/pressure reducing station into an 11x16-foot concrete block building and the installation of the necessary piping, pavement, and electric-control equipment. The Running Springs Water District (RSWD), as the lead agency for the project, required the study in compliance with the California Environmental Quality Act (CEQA; PRC §21000, et seq.).

The purpose of this study is to provide RSWD with the necessary information and analysis to determine whether the proposed project would cause substantial adverse changes to any "historical resources," as defined by CEQA, that may exist in or around the project area. In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, initiated a Native American Sacred Lands File search, pursued historical background research, and carried

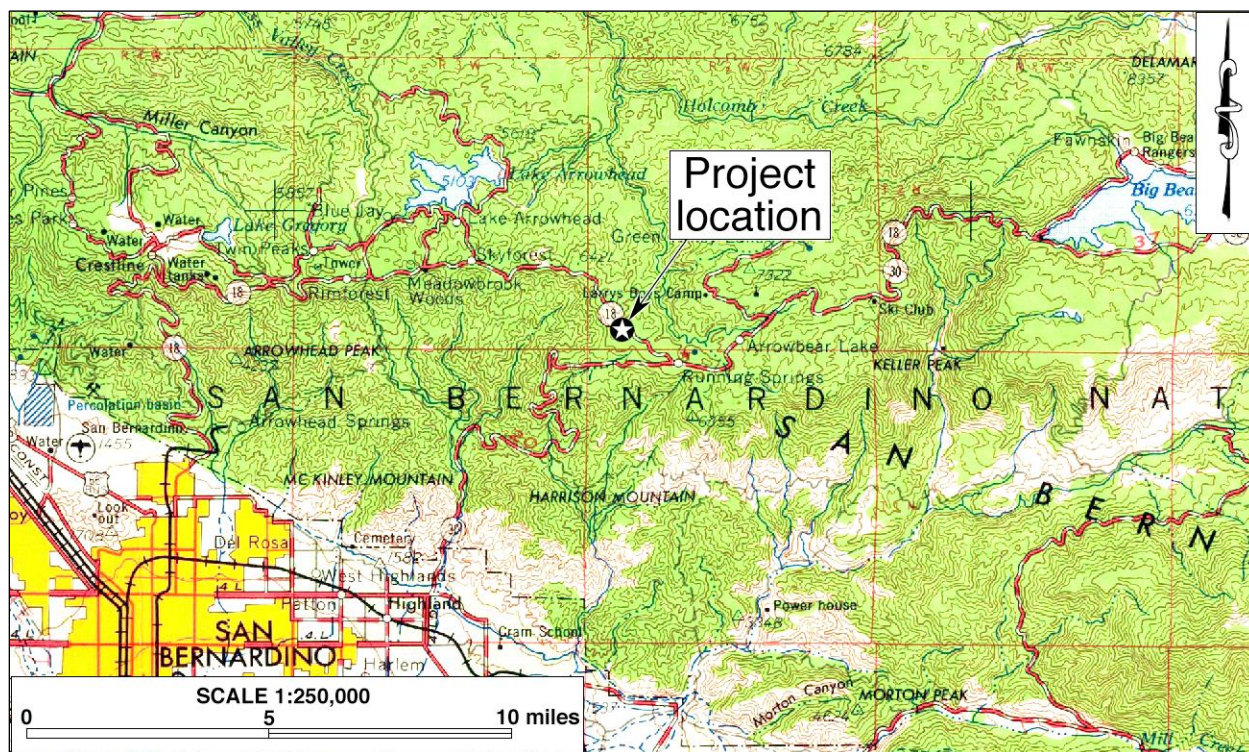


Figure 1. Project vicinity. (Based on USGS San Bernardino, Calif., 120'x60' quadrangle [USGS 1969])

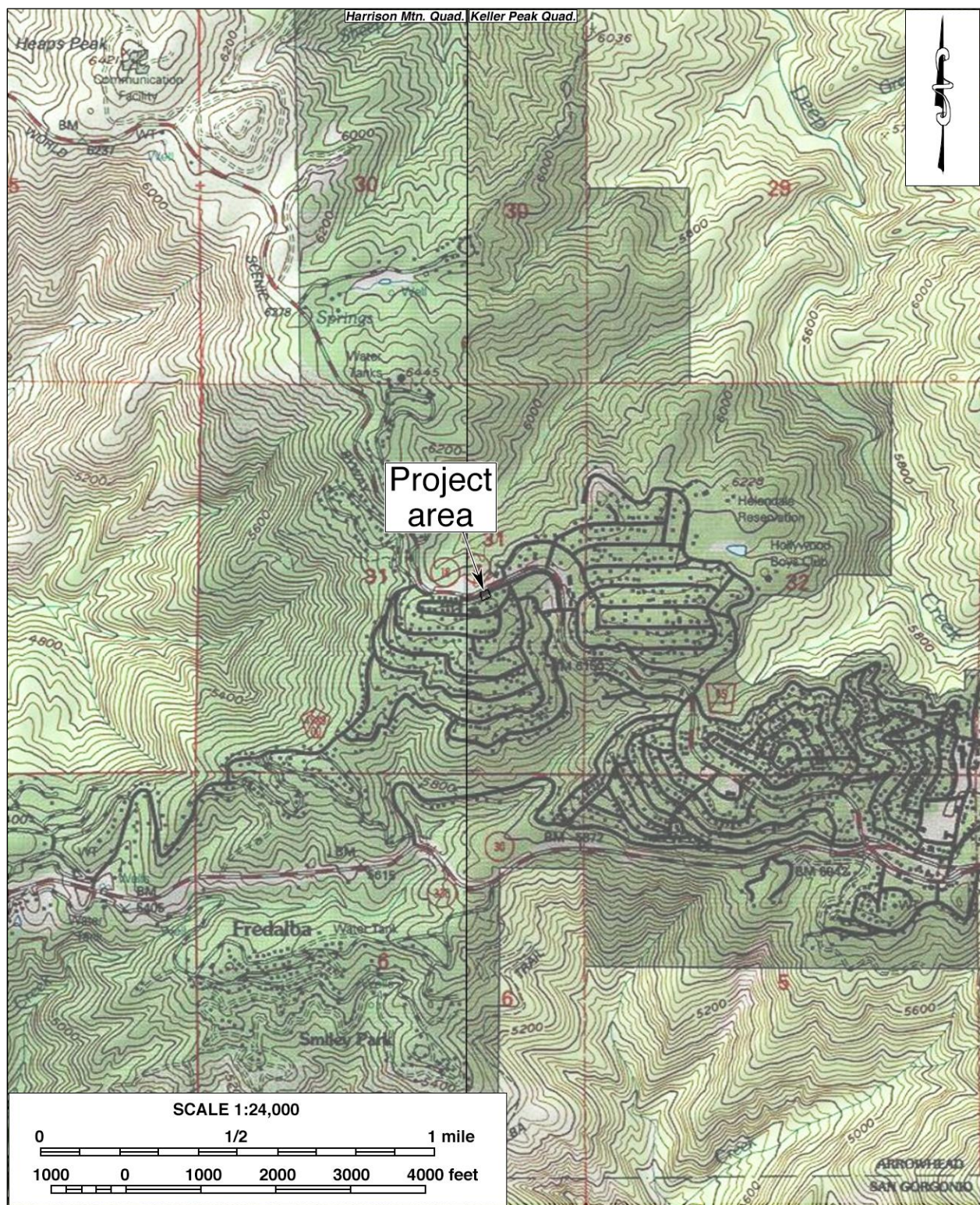


Figure 2. Project location. (Based on USGS Harrison Mountain and Keller Peak, Calif., 7.5' quadrangles [USGS 1988; 1996])

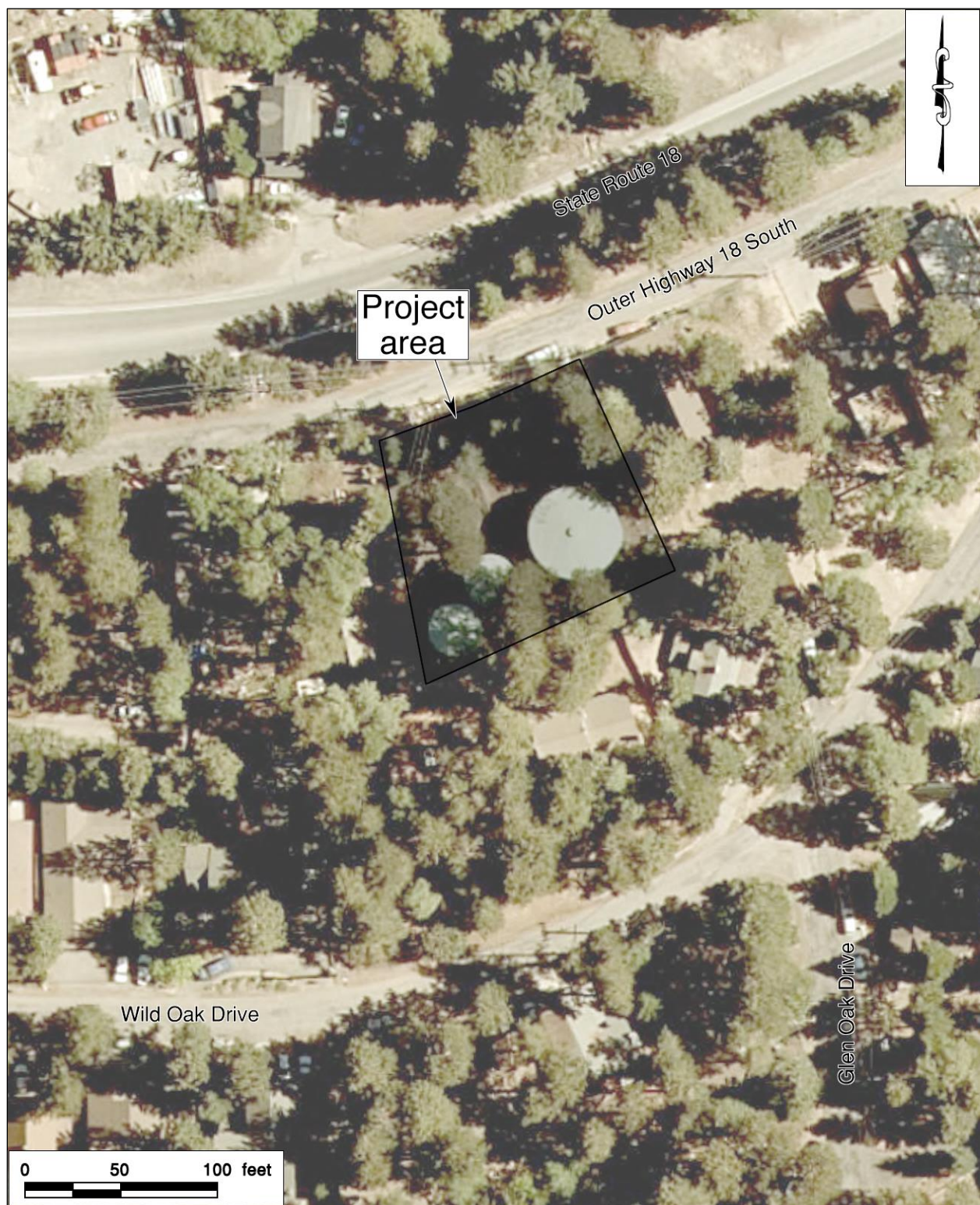


Figure 3. Recent satellite image of the project location.

out an intensive-level field survey. The following report is a complete account of the methods, results, and final conclusions of the study. Qualifications of personnel who participated in the study are provided in Appendix 1.

SETTING

CURRENT NATURAL SETTING

Situated among the Rim of the World communities along State Route 18 and deep in the San Bernardino Mountains, the Running Springs area features an alpine climate and a forest-dominated environment in sharp contrast to the Mediterranean climate and desert environment in most of southern California. Seasonal temperatures range from average lows in the mid-twenty degrees Fahrenheit in January to average highs in the mid-eighties in July, much closer to the national average than to that of the nearby San Bernardino-Riverside region (NOAA n.d.). The average precipitation reaches around one inch of rainfall and four inches of snowfall (*ibid.*).

The project area is located in the northwestern portion of the town of Running Springs, on the northern edge of a residential neighborhood. Elevations in the project area range around 6,300-6,320 feet above mean sea level, and the terrain is relatively level with a gradual incline to the south. The property is the site of the existing ROWCO water facility with three steel reservoir tanks. The ground surface in the area has been extensively disturbed by the construction and operations of the reservoirs as well as structures that have been removed (Fig. 4). The area lies within the Mixed Evergreen Forest plant community, and the vegetation observed on the property includes manzanita, Jeffrey pine, California incense cedar, and California black oak.

CULTURAL SETTING

Archaeological Context

The earliest evidence of human occupation in inland southern California was discovered below the surface of an alluvial fan in the northern portion of the Lakeview Mountains, overlooking the San Jacinto Valley, with radiocarbon dates clustering around 9,500 before present (B.P.; Horne and McDougall 2008). Another site found near the shoreline of Lake Elsinore, close to the confluence of Temescal Wash and the San Jacinto River, yielded radiocarbon dates between 8,000 and 9,000 B.P. (Grenda 1993). Additional sites with isolated Archaic dart points, bifaces, and other associated lithic artifacts from the same age range have been found in the Cajon Pass area of the San Bernardino Mountains, typically on top of knolls with good viewsheds (Basgall and True 1985; Goodman and McDonald 2001; Goodman 2002; Milburn et al. 2008).

The cultural history of southern California has been summarized into numerous chronologies, including those developed by Chartkoff and Chartkoff (1984), Warren (1984), and others. Specifically, the prehistory of the inland region has been addressed by O'Connell et al. (1974), McDonald et al. (1987), Keller and McCarthy (1989), Grenda (1993), Goldberg (2001), and Horne and McDougall (2008). Although the beginning and ending dates of the recognized cultural horizons vary among different parts of the region, the general framework for the prehistory can be divided into three primary periods:



Figure 4. Overview of the project area. (Photograph taken on March 14, 2024; view to the northwest)

- **Paleoindian Period (ca. 18,000-9,000 B.P.):** Native peoples of this period created fluted spearhead bases designed to be hafted to wooden shafts. The distinctive method of thinning bifaces and spearhead preforms by removing long, linear flakes leaves diagnostic Paleoindian markers at tool-making sites. Other artifacts associated with the Paleoindian toolkit include choppers, cutting tools, retouched flakes, and perforators. Sites from this period are very sparse across the landscape and most are deeply buried.
- **Archaic Period (ca. 9,000-1,500 B.P.):** Archaic sites are characterized by abundant lithic scatters of considerable size with many biface thinning flakes, bifacial preforms broken during manufacture, and well-made groundstone bowls and basin metates. As a consequence of making dart points, many biface thinning waste flakes were generated at individual production stations, which is a diagnostic feature of Archaic sites.
- **Late Prehistoric Period (ca. 1,500 B.P.-contact):** Sites from this period typically contain small lithic scatters from the manufacture of small arrow points, expedient groundstone tools such as tabular metates and unshaped manos, wooden mortars with stone pestles, acorn or mesquite bean granaries, ceramic vessels, shell beads suggestive of extensive trading networks, and steatite implements such as pipes and arrow shaft straighteners.

Ethnohistorical Context

The present-day Running Springs area is a part of the homeland of the Serrano people, which is centered in the San Bernardino Mountains but also includes part of the San Gabriel Mountains, much

of the San Bernardino Valley, and the Mojave River valley in the southern portion of the Mojave Desert, reaching as far as the Cady, Bullion, Sheep Hole, and Coxcomb Mountains to the east, the Twentynine Palms area to the north, and possibly the southern edge of Kern County to the west. The name “Serrano” was derived from a Spanish term meaning “mountaineer” or “highlander.” The basic written sources on Serrano culture are Kroeber (1925), Strong (1929), and Bean and Smith (1978). The following ethnographic discussion of the Serrano people is based mainly on these sources.

Prior to European contact, the Serrano were primarily hunter-gatherers and occasionally fishers, and their long-term settlements were located mostly on elevated terraces, hills, and finger ridges near reliable sources of water, especially in foothills and along major rivers. They were loosely organized into exogamous clans, which were led by hereditary heads, and the clans in turn were affiliated with one of two exogamous moieties. The clans were patrilineal, but their exact structure, function, and number are unknown, except that the clans were the largest autonomous political and landholding units. There was no pan-tribal political union among the clans, but they shared strong trade, ceremonial, and marital connections that sometimes also extended to other surrounding nations, such as the Kitanemuk, the Tataviam, and the Cahuilla.

Although contact with Europeans may have occurred as early as 1771 or 1772, Spanish influence on Serrano lifeways was minimal until the 1810s, when a mission *asistencia* was established on the southern edge of Serrano territory. Between then and the end of the mission era in 1834, most of the Serrano in the western portion of their traditional territory were removed to the nearby missions. In the eastern portion, a series of punitive expeditions in 1866-1870 resulted in the death or displacement of almost all remaining Serrano population in the San Bernardino Mountains. Today, most Serrano descendants are affiliated with the Yuhaaviatam of San Manuel Nation (formerly known as the San Manuel Band of Mission Indians), the Morongo Band of Mission Indians, or the Serrano Nation of Indians.

Historical Context

In 1772, a small force of Spanish soldiers under the command of Pedro Fages, military *comandante* of Alta California, became the first Europeans to set foot in the San Bernardino Mountains, followed shortly afterwards by the famed explorer Francisco Garcés in 1776 (Beck and Haase 1974:15). During the next 70 years, however, the Spanish/Mexican colonization activities in Alta California, which concentrated predominantly in the coastal regions, left little physical impact on the San Bernardinos. Aside from occasional explorations and punitive expeditions against Indian livestock raiders, the mountainous hinterland of California remained largely beyond the attention of the missionaries, the *rancheros*, and the provincial authorities. The name “San Bernardino” was bestowed on the region in the 1810s, when the *asistencia* and an associated mission rancho were established under that name in the valley lying to the south (Lerch and Haenszel 1981).

After the U.S. annexation of Alta California in 1848, the rich resources offered by the San Bernardino Mountains brought about drastic changes, spurred by the influxes of settlers from the eastern United States. Beginning in the early 1850s, the dense forest was turned into the scene—and victim—of a booming lumber industry, which brought the first wagon roads and industrial establishments into the San Bernardino Mountains. In 1860, the discovery of gold in the Bear and

Holcomb Valleys ushered in a miniature gold rush, and with it a number of mining towns with several thousand residents. Around the same time, the lush mountain range also attracted cattlemen, shepherds, and their herds, and within the next two decades gained the reputation of being the best summer grazing land in southern California. Then in 1884-1885, an even more valuable resource in arid southern California, water, became the focus of development in the San Bernardino Mountains when the Bear Valley Land and Water Company created the Big Bear Lake reservoir to ensure the success and prosperity of the Redlands colony (Robinson 1989:170).

By the 1890s, excessive logging and sheep grazing in the San Bernardino Mountains had given rise to a forest conservation movement among residents of the San Bernardino Valley to protect the watershed. The movement succeeded, in 1893, in persuading the U.S. government to create the San Bernardino Forest Reserve, later renamed the San Bernardino National Forest, and over the next few decades effectively brought an end to logging and sheep grazing in the San Bernardino Mountains (Robinson 1989:96-99; Robinson and Risher 1990:9). In the meantime, the favorable climate, enticing scenery, and the string of manmade lakes gradually propelled the resort industry to the forefront of development in the San Bernardino Mountains, burgeoning from the first commercial resort established on the shore of Big Bear Lake in 1888 (Atchley 1980:22-23). Since then, the San Bernardino Mountains have grown into—and remain—one of southern California’s most popular tourist attractions*.

In 1915, the budding tourist industry received a major boost from the completion of the automobile highway known as Rim of the World Drive (Drake 1949:26; Robinson 1989:183-185). Nine years later, the area around the junction of Rim of the World Drive and City Creek Road, known in the logging days as Hunsaker Flats, was sold to a syndicate headed by realtor B.L. Smith, who promptly laid out a town named Running Springs Park, with a small business district, housing tracts, and a resort (Robinson 1989:160). The word “Park” was soon dropped from the name, and within a span of three years Running Springs had become a town of some 400 residents (*ibid.*:160-162). By then, the town had a general store, a café, and a gasoline station to serve the passing tourists (*ibid.*). With these, Running Springs began its new life as an important stop at the nexus of two major highways leading to the mountain resorts such as Big Bear Lake and Lake Arrowhead, a role it continues to serve today.

RESEARCH METHODS

RECORDS SEARCH

On February 20, 2024, CRM TECH archaeologist Nina Gallardo conducted the historical/archaeological resources record search for this study at the South Central Coastal Information Center (SCCIC), California State University, Fullerton, which is the official repository for San Bernardino County in the California Historical Resources Information System. During the records search, Gallardo examined the SCCIC’s digital maps, records, and databases for previously identified cultural resources and existing cultural resources reports within a one-mile radius of the project area. Previously identified cultural resources include properties designated as California Historical Landmarks, Points of Historical Interest, and San Bernardino County Landmarks, as well as those

* For further discussion of the history of the San Bernardino Mountains, see LaFuze (1971) and Robinson (1989).

listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resources Inventory.

HISTORICAL RESEARCH

Historical background research for this study was conducted by CRM TECH principal investigator/historian Bai “Tom” Tang. Sources consulted during the research included published literature in local history, historical maps of the Running Springs area, and aerial/satellite photographs of the project vicinity. Among the maps consulted for this study were U.S. General Land Office (GLO) land survey plat maps dated 1882-1884 and USGS topographic maps dated 1901-1996, which are accessible at the websites of the USGS and the U.S. Bureau of Land Management. The aerial and satellite photographs, taken in 1938-2023, are available at the Nationwide Environmental Title Research (NETR) Online website and through the Google Earth software.

NATIVE AMERICAN SACRED LANDS FILE SEARCH

On February 15, 2024, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for a record search in the commission’s Sacred Lands File. NAHC is the State of California’s trustee agency for the protection of “tribal cultural resources,” as defined by California Public Resources Code §21074, and is tasked with identifying and cataloging properties of Native American cultural value, including places of special religious, spiritual, or social significance and known graves and cemeteries throughout the state. The response from NAHC is summarized below and attached to the report in Appendix 2.

FIELD SURVEY

On March 14, 2024, CRM TECH archaeologist Hunter O’Donnell performed the field survey of the project area. The survey was completed on foot at an intensive level by walking a series of parallel east-west transects at 15-meter (approximately 50-foot) intervals across the vacant portion of the property. In this way, the ground surface in the project area was carefully examined for any evidence of human activities dating to the prehistoric or historic period (i.e., 50 years or older). Ground visibility was generally poor (30-40%) due to significant duff deposit over most of the unpaved ground surface but was deemed adequate for this study in light of the extent of past ground disturbance. As a part of the survey effort, a systematic field inspection and field recordation procedures, including photo-documentation, were carried out on the existing water facility, which appeared to be historical in origin, and the results were then compiled into standard site record forms for submittal to the California Historical Resources Inventory (see App. 3).

RESULTS AND FINDINGS

RECORDS SEARCH

According to SCCIC records, the project area was included in the scope of at least two large-scale cultural resources studies completed in 2006 and 2009, both with negative results in the project vicinity. Since these studies are now 15 years old or older, they are considered out of date for statutory compliance purposes today. No historical/archaeological resources were previously

Table 1. Previously Recorded Cultural Resources within the Scope of the Records Search		
Primary No.	Trinomial	Description
36-001630	CA-SBR-1630	Prehistoric habitation remains and bedrock milling features
36-002310	CA-SBR-2310	Prehistoric manos, scrapers, and lithic flakes
36-007049	CA-SBR-7049H	Rim of the World Drive
36-007132	CA-SBR-7132H	Old City Creek Road; Highland Lumber/Brookings Lumber Toll Road
36-007133	CA-SBR-7133H	Roads and residences associated with Brookings Lumber Company
36-012189	CA-SBR-12181H	State Route 18
36-012757	N/A	Camp with 15 structures
36-012759	N/A	Historic-period refuse dump associated with 36-007133
36-014063	N/A	Historic-period refuse scatter
36-024006	CA-SBR-15191H	City Creek Road
36-024630	CA-SBR-15671H	Unnamed road
36-024635	CA-SBR-15676H	Unnamed road
36-024687	CA-SBR-15728H	Panorama Drive
36-024689	CA-SBR-15730H	Unnamed road
36-024690	CA-SBR-15731H	Fredalba Road

recorded within or adjacent to the project boundaries. Within the one-mile scope of the records search, SCCIC records identify at least 40 additional studies conducted between 1976 and 2013. These and other similar studies in the vicinity resulted in the recordation of 15 historical/archaeological sites, as listed above in Table 1.

Two of the 15 sites were of prehistoric (i.e., Native American) origin, consisting of habitation remains, bedrock milling features, and scattered groundstone and flake-stone artifacts. These two sites were recorded roughly 0.6 mile to the south of the project area and 0.9 mile to the northwest, respectively. The other 13 sites dated to the historic period and included primarily roads, buildings, and refuse deposits. The nearest among these are two linear sites designated 36-007049 (CA-SBR-7049H) and 36-012189 (CA-SBR-12181H) in the California Historical Resources Inventory. Representing the historical alignments of Rim of the World Drive and State Route 18, respectively, the two linear sites follow the same course through the Running Springs area, lying some 40 feet to the northwest of the project area, across Outer Highway 18 South. All of the other sites were located at least a half-mile from the project location.

HISTORICAL RESEARCH

Historical maps of the Running Springs area show ample evidence of human activities, more specifically various roads, in the project vicinity at least by the early 1880s (Fig. 5). The main road to San Bernardino at the time traversed in a canyon a few hundred feet to the north of the project location (Fig. 5). Towards the end of the 19th century, that road had been realigned to a course close to that of present-day State Route 18 (Fig. 6). At least by 1938, the mountain highway had assumed its current route north of the project area (NETR Online 1938).

As mentioned above, the Running Springs area began to coalesce as a community in the 1920s (Robinson 1989:160-162). However, the early growth of the community was concentrated about a mile southeast of the project location, around the present-day intersection of State Routes 18 and 330, and as of the early 1950s little development had occurred around the project area (NETR Online 1938; Fig. 7). The residential neighborhood in this area today was a part of the ROWCO development, which was launched in 1957 by Bill Baker, a local real estate broker, developer, and

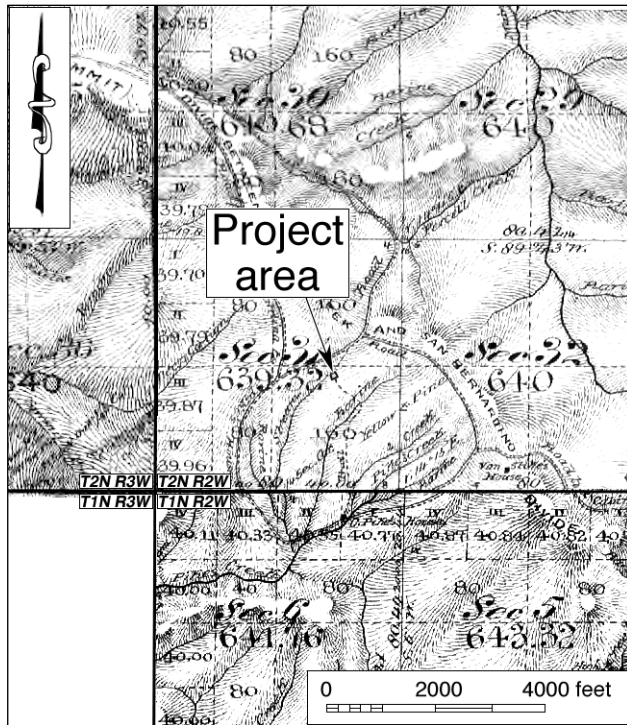


Figure 5. Project area and vicinity in 1857-1883. (Source: GLO 1882a; 1882b; 1884)

owner of a popular café and bar in Running Springs named the Wagon Wheel (Teter n.d.). The water storage facility in the project area was evidently established in association with that development.

The first of the three reservoir tanks in the project area was built between 1953 and 1966, around the same time as the streets nearby, including Outer Highway 18 South (NETR Online 1953-1966). The other two tanks in the project area were added between 1966 and 1980 (NETR Online 1966-1980). The beginning of the facility may have predated the establishment of RSWD in 1958, but it was later absorbed into the RSWD system. Historical aerial and satellite images indicate that while some secondary features, such as small sheds, appeared and disappeared at the facility over the years, the overall land use in the project area has remained unchanged to the present time (NETR Online 1966-2020; Google Earth 1995-2023).

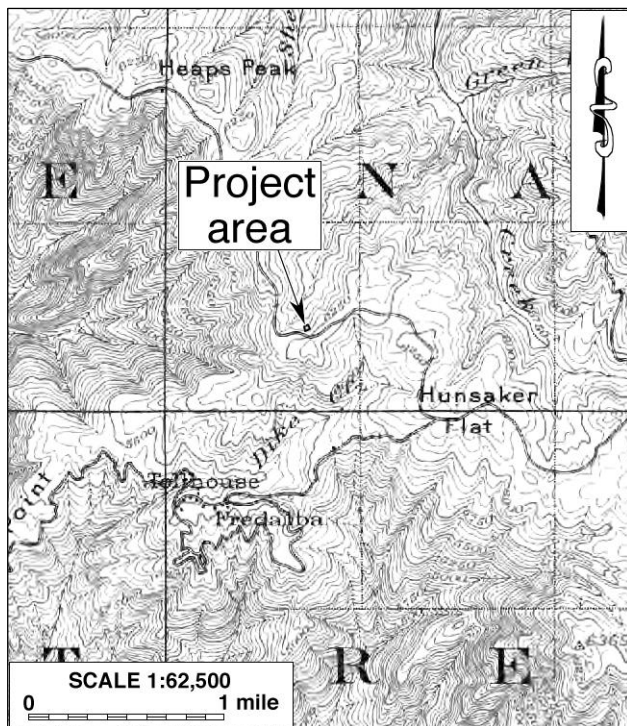


Figure 6. Project area and vicinity in 1898-1899. (Source: USGS 1901)

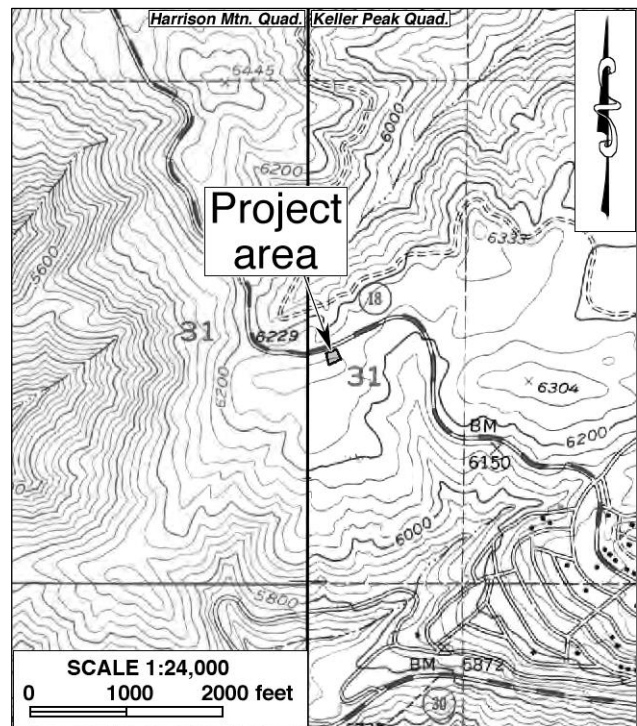


Figure 7. Project area and vicinity in 1952-1953. (Source: USGS 1953a; 1953b)

NATIVE AMERICAN SACRED LANDS FILE SEARCH

In response to CRM TECH's inquiry, NAHC reported in a letter dated February 21, 2024, that the Sacred Lands File identified no Native American cultural resources in the project vicinity. Noting that the absence of known site information does not preclude the presence of cultural resources, however, NAHC recommended contacting local Native American representatives in the region for further information and provided a referral list of nine individuals representing five tribal organizations for that purpose. NAHC's reply is attached in Appendix 2 for reference for future government-to-government consultations by RSWD with the pertinent tribal groups, if necessary.

FIELD SURVEY

During the field survey, the existing water storage facility in the project area, which dates to the late historic period as mentioned above, was recorded into the California Historical Resources Inventory and designated temporarily as Site 4103-1H, pending the assignment of a permanent identification number by the SCCIC (see App. 3). The facility consists of the three reservoir tanks (Fig. 8), the remains of a structure, and a modern shed.

The two smaller tanks, each measuring approximately 26 feet in diameter and 24 feet in height, are constructed with two courses of riveted sectional steel panels. The third reservoir tank,



Figure 8. Reservoir tanks at 4103-1H. (Photograph taken on March 14, 2024; view to the south)

approximately 48 feet in diameter and 24 feet in height, is constructed of three single-panel courses of steel. All three tanks rest on concrete foundations and are painted in a pale green color, with ladders and content gauges on the exterior. The western portion of the property is paved with asphalt. Along the east side of the asphalt are steel upright post footings marking the former site of a structure that was removed around 2004 (Google Earth 2003-2005). No other potential “historical resources” were encountered within the project area during the survey.

DISCUSSION

APPLICABLE STATUTORY/REGULATORY FRAMEWORK

The purpose of this study is to identify any cultural resources within or adjacent to the project area and to assist RSWD in determining whether such resources meet the official definition of “historical resources” as provided in the California Public Resources Code, in particular CEQA. According to PRC §5020.1(j), “‘historical resource’ includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.”

More specifically, CEQA guidelines state that the term “historical resources” applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). Regarding the proper criteria for the evaluation of historical significance, CEQA guidelines mandate that “generally a resource shall be considered by the lead agency to be ‘historically significant’ if the resource meets the criteria for listing on the California Register of Historical Resources” (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

- (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.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.
(PRC §5024.1(c))

RESOURCE EVALUATION

In summary of the research results outlined above, Site 4103-1H, consisting of three water tanks from the 1950s-1970s era with associated features, is the only potential “historical resource” identified in the project area. The construction of the reservoirs in the 1950s-1970s was evidently a result of the continued population growth in San Bernardino Mountain communities, with improved roads and post-World War II prosperity bringing new seasonal and permanent residents to the area. As one of the numerous similar facilities of similar vintages, however, it does not demonstrate a

unique, significant, or particularly close association with that pattern of events or any other established historic theme, nor have any specific events or persons of recognized historic significance been identified in association with the reservoirs.

As common infrastructure features of standard design and construction, the reservoirs do not embody the distinctive characteristics of any style, type, period, or method of construction. They are not known to represent the work of an important designer, builder, or engineer, nor do they exhibit any remarkable qualities in design, construction, engineering, or aesthetics. Dating to the late historic period, the facility holds little promise for important historical or archaeological data for the study of public utility works in the post-WWII era, a subject that is well documented in existing literature and archival records. Based on these considerations, Site 4103-1H does not appear to meet any of the criteria for listing in the California Register of Historical Resources. Therefore, it does not qualify as a “historical resource” under CEQA provisions.

CONCLUSION AND RECOMMENDATIONS

CEQA establishes that “a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment” (PRC §21084.1). “Substantial adverse change,” according to PRC §5020.1(q), “means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired.” In conclusion, Site 4103-1H, the only historical/archaeological site identified in the project area, does not appear to meet CEQA definition of a “historical resource.” Therefore, CRM TECH presents the following recommendations to RSWD:

- The project as currently proposed will not cause a substantial adverse change to any known “historical resources.”
- No further cultural resources investigation will be necessary for the project unless construction plans undergo such changes as to include areas not covered by this study.
- If buried cultural materials are encountered during earth-moving operations associated with the project, all work within 50 feet of the discovery should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

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 1953b Map: Keller Peak, Calif. (7.5', 1:24,000); aerial photographs taken in 1952, field-checked in 1953.
 1969 Map: San Bernardino, Calif. (120'x60', 1:250,000); 1958 edition revised.
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**APPENDIX 1:
PERSONNEL QUALIFICATIONS**

**PRINCIPAL INVESTIGATOR, HISTORY
Bai “Tom” Tang, M.A.**

Education

- | | |
|-----------|--|
| 1988-1993 | Graduate Program in Public History/Historic Preservation, University of California, Riverside. |
| 1987 | M.A., American History, Yale University, New Haven, Connecticut. |
| 1982 | B.A., History, Northwestern University, Xi'an, China. |
| 2000 | “Introduction to Section 106 Review,” presented by the Advisory Council on Historic Preservation and the University of Nevada, Reno. |
| 1994 | “Assessing the Significance of Historic Archaeological Sites,” presented by the Historic Preservation Program, University of Nevada, Reno. |

Professional Experience

- | | |
|-----------|---|
| 2002- | Principal Investigator, CRM TECH, Riverside/Colton, California. |
| 1993-2002 | Project Historian/Architectural Historian, CRM TECH, Riverside, California. |
| 1993-1997 | Project Historian, Greenwood and Associates, Pacific Palisades, California. |
| 1991-1993 | Project Historian, Archaeological Research Unit, University of California, Riverside. |
| 1990 | Intern Researcher, California State Office of Historic Preservation, Sacramento. |
| 1990-1992 | Teaching Assistant, History of Modern World, University of California, Riverside. |
| 1988-1993 | Research Assistant, American Social History, University of California, Riverside. |
| 1985-1988 | Research Assistant, Modern Chinese History, Yale University. |
| 1985-1986 | Teaching Assistant, Modern Chinese History, Yale University. |
| 1982-1985 | Lecturer, History, Xi'an Foreign Languages Institute, Xi'an, China. |

Cultural Resources Management Reports

Preliminary Analyses and Recommendations Regarding California's Cultural Resources Inventory System (with Special Reference to Condition 14 of NPS 1990 Program Review Report). California State Office of Historic Preservation working paper, Sacramento, September 1990.

Numerous cultural resources management reports with the Archaeological Research Unit, Greenwood and Associates, and CRM TECH, since October 1991.

PRINCIPAL INVESTIGATOR, ARCHAEOLOGY
Michael Hogan, Ph.D., RPA (Registered Professional Archaeologist)

Education

- 1991 Ph.D., Anthropology, University of California, Riverside.
- 1981 B.S., Anthropology, University of California, Riverside; with honors.
- 1980-1981 Education Abroad Program, Lima, Peru.

- 2002 “Section 106—National Historic Preservation Act: Federal Law at the Local Level,”
UCLA Extension Course #888.
- 2002 “Recognizing Historic Artifacts,” workshop presented by Richard Norwood,
Historical Archaeologist.
- 2002 “Wending Your Way through the Regulatory Maze,” symposium presented by the
Association of Environmental Professionals.
- 1992 “Southern California Ceramics Workshop,” presented by Jerry Schaefer.
- 1992 “Historic Artifact Workshop,” presented by Anne Duffield-Stoll.

Professional Experience

- 2002- Principal Investigator, CRM TECH, Riverside/Colton, California.
- 1999-2002 Project Archaeologist/Field Director, CRM TECH, Riverside, California.
- 1996-1998 Project Director and Ethnographer, Statistical Research, Inc., Redlands, California.
- 1992-1998 Assistant Research Anthropologist, University of California, Riverside.
- 1992-1995 Project Director, Archaeological Research Unit, U.C. Riverside.
- 1993-1994 Adjunct Professor, Riverside Community College, Mt. San Jacinto College, U.C.
Riverside, Chapman University, and San Bernardino Valley College.
- 1991-1992 Crew Chief, Archaeological Research Unit, U.C. Riverside.
- 1984-1998 Project Director, Field Director, Crew Chief, and Archaeological Technician for
various southern California cultural resources management firms.

Research Interests

Cultural Resource Management, Southern Californian Archaeology, Settlement and Exchange Patterns, Specialization and Stratification, Culture Change, Native American Culture, Cultural Diversity.

Cultural Resources Management Reports

Principal investigator for, author or co-author of, and contributor to numerous cultural resources management study reports since 1986.

Memberships

Society for American Archaeology; Society for California Archaeology; Pacific Coast Archaeological Society; Coachella Valley Archaeological Society.

PROJECT ARCHAEOLOGIST/REPORT WRITER
Frank J. Raslich, M.A.

Education

- 2016-2010 Ph.D. candidate, Michigan State University, East Lansing.
2010 M.A., Anthropology, Michigan State University, East Lansing.
2005 B.A., Anthropology, University of Michigan, Flint.
- 2019 Grant and Research Proposal Writing for Archaeologists; Society for American Archaeology online seminar.
- 2014 Bruker Industries Tracer S1800 pXRF Training; presented by Dr. Bruce Kaiser, Bruker Scientific.

Professional Experience

- 2022-2022 Project Archaeologist/Report Writer, CRM TECH, Colton, California.
Archaeological Monitor, Agua Caliente Band of Cahuilla Indians, Palm Springs, California.
- 2014-2022 Board of Directors, Ziibiwing Center of Anishinabe Culture and Lifeways, Saginaw Chippewa Indian Tribe of Michigan.
- 2008-2021 Archaeological Consultant, Saginaw Chippewa Indian Tribe of Michigan.
2019 Archaeologist, Sault Tribe of Chippewa Indians and Little Traverse Bay Band of Odawa Indians.
- 2016-2018 Adjunct Lecturer, Michigan State University, East Lansing.
2017-2018 Adjunct Lecturer, University of Michigan, Flint.
- 2009-2017 Teaching Assistant, Michigan State University, East Lansing.
- 2008-2014 Research Assistant, Intellectual Property Issues in Cultural Heritage, Simon Fraser University, British Columbia, Canada.
- 2010-2013 Research Assistant, Michigan State University, East Lansing.
2009-2011 Archaeologist/Crew Chief, Saginaw Chippewa Indian Tribe of Michigan.

Publications

- 2017 Preliminary Results of a Handheld X-Ray Fluorescence (pXRF) Analysis on a Marble Head Sarcophagus Sculpture from the Collection of the Kresge Art Center, Michigan State University. Submitted to Jon M. Frey, Department of Art, Art History, and Design, Michigan State University, East Lansing.
- 2013 Geochemical Analysis of the Dickenson Group of the Upper Peninsula, Michigan: A study of an Accreted Terrane of the Superior Province. *Geological Society of America Abstracts with Programs* 45:4(53).

PROJECT ARCHAEOLOGIST
Hunter C. O'Donnell, B.A.

Education

2016- M.A. Program, Applied Archaeology, California State University, San Bernardino.
2015 B.A. (*cum laude*), Anthropology, California State University, San Bernardino.
2012 A.A., Social and Behavioral Sciences, Mt. San Antonio College, Walnut, California.
2011 A.A., Natural Sciences and Mathematics, Mt. San Antonio College, Walnut, California.

Professional Experience

2017- Project Archaeologist, CRM TECH, Colton, California.
2016-2018 Graduate Research Assistant, Applied Archaeology, California State University, San Bernardino.
2016-2017 Cultural Intern, Cultural Department, Pechanga Band of Luiseño Indians, Temecula, California.
2015 Archaeological Intern, U.S. Bureau of Land Management, Barstow, California.
2015 Peer Research Consultant: African Archaeology, California State University, San Bernardino.

PROJECT ARCHAEOLOGIST/NATIVE AMERICAN LIAISON
Nina Gallardo, B.A.

Education

2004 B.A., Anthropology/Law and Society, University of California, Riverside.

Professional Experience

2004- Project Archaeologist, CRM TECH, Riverside/Colton, California.

Cultural Resources Management Reports

Co-author of and contributor to numerous cultural resources management reports since 2004.

APPENDIX 2

NATIVE AMERICAN SACRED LANDS FILE
SEARCH RESULTS



CHAIRPERSON
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VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki,
Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
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Luiseño

COMMISSIONER
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COMMISSIONER
Stanley Rodriguez
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West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

STATE OF CALIFORNIA

Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

February 21, 2024

Nina Gallardo
CRM TECH

Via Email to: ngallardo@crmtech.us

Re: Proposed ROWCO Reservoirs & Booster Replacement Project, San Bernardino County

To Whom It May Concern:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Murphy.Donahue@NAHC.ca.gov

Sincerely,

Murphy Donahue

Murphy Donahue
Cultural Resources Analyst

Attachment

**Native American Heritage Commission
Native American Contact List
San Bernardino County
2/21/2024**

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation	Counties
Agua Caliente Band of Cahuilla Indians	F	Lacy Padilla, THPO Operations Manager	5401 Dinah Shore Drive Palm Springs, CA, 92264	(760) 333- 5222	(760) 699- 6919	ACBCI-THPO@aguacaliente.net	Cahuilla	Imperial, Riverside, San Bernardino, San Diego
Morongo Band of Mission Indians	F	Robert Martin, Chairperson	12700 Pumarra Road Banning, CA, 92220	(951) 755- 5110	(951) 755- 5177	abrierty@morongo-nsn.gov	Cahuilla Serrano	Imperial, Los Angeles, Riverside, San Bernardino, San Diego
Morongo Band of Mission Indians	F	Ann Brierty, THPO	12700 Pumarra Road Banning, CA, 92220	(951) 755- 5259	(951) 572- 6004	abrierty@morongo-nsn.gov	Cahuilla Serrano	Imperial, Los Angeles, Riverside, San Bernardino, San Diego
Quechan Tribe of the Fort Yuma Reservation	F	Jill McCormick, Historic Preservation Officer	P.O. Box 1899 Yuma, AZ, 85366	(928) 261- 0254		historicpreservation@quechantribe.com	Quechan	Imperial, Kern, Los Angeles, Riverside, San Bernardino, San Diego
Quechan Tribe of the Fort Yuma Reservation	F	Jordan Joaquin, President, Quechan Tribal Council	P.O.Box 1899 Yuma, AZ, 85366	(760) 919- 3600		executivesecretary@quechantribe.com	Quechan	Imperial, Kern, Los Angeles, Riverside, San Bernardino, San Diego
Quechan Tribe of the Fort Yuma Reservation	F	Manfred Scott, Acting Chairman - Kw'ts'an Cultural Committee	P.O. Box 1899 Yuma, AZ, 85366	(928) 210- 8739		culturalcommittee@quechantribe.com	Quechan	Imperial, Kern, Los Angeles, Riverside, San Bernardino, San Diego
San Manuel Band of Mission Indians	F	Alexandra McCleary, Senior Manager of Cultural Resources Management	26569 Community Center Drive Highland, CA, 92346	(909) 633- 0054		alexandra.mccleary@sanmanuel-nsn.gov	Serrano	Kern, Los Angeles, Riverside, San Bernardino
Serrano Nation of Mission Indians	N	Mark Cochrane, Co-Chairperson	P. O. Box 343 Patton, CA, 92369	(909) 578- 2598		serranonation1@gmail.com	Serrano	Los Angeles, Riverside, San Bernardino
Serrano Nation of Mission Indians	N	Wayne Walker, Co-Chairperson	P. O. Box 343 Patton, CA, 92369	(253) 370- 0167		serranonation1@gmail.com	Serrano	Los Angeles, Riverside, San Bernardino

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed ROWCO Reservoirs & Booster Replacement Project, San Bernardino County.

Record: PROJ-2024-000949
Report Type: List of Tribes
Counties: All
NAHC Group: All

APPENDIX 3

CALIFORNIA HISTORICAL RESOURCES INVENTORY
RECORD FORMS

Site 4103-1H

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 *Resource Name or # (Assigned by recorder) CRM TECH 4103-1H

P1. Other Identifier: ROWCO Water Facility

*P2. Location: ☒ Not for Publication Unrestricted *a. County San Bernardino

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad Keller Peak, Calif. Date 1996

T2N; R2W; NW 1/4 of SW 1/4 of Sec 31 ; S.B. B.M.

c. Address N/A City Running Springs Zip 92382

d. UTM: (Give more than one for large and/or linear resources) Zone 11 ; 488,490 mE/ 3,785,980 mN
UTM Derivation: ☐ USGS Quad ☒ GPS (NAD 83)

e. Other Locational Data: (e.g., parcel #, directions to resource, etc., as appropriate) Assessor's Parcel Numbers 0328-201-05 and -06; on the south side of Outer Highway 18 South between Hollymont Drive and All View Drive

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): The ROWCO Water Facility contains three reservoir tanks, the remains of a structure, and a modern shed. The two smaller tanks, each measuring approximately 26' in diameter and 24' in height, are constructed with two courses of riveted sectional steel panels. The third reservoir tank, approximately 48' in diameter and 24' in height, is constructed of three single-panel courses of steel. All three tanks rest on concrete foundations and are painted in a pale green color, with ladders and content gauges on the exterior. The western portion of the property is paved with asphalt. Along the east side of the asphalt are steel upright post footings marking the former site of a structure that was removed around 2004.

*P3b. Resource Attributes: (List attributes and codes) HP22: Water reservoirs

*P4. Resources Present: ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District
☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo (view, date, accession number): March 14, 2024; view to the south

*P6. Date Constructed/Age and Sources:

☒ Historic ☐ Prehistoric ☐
Both 1950s-1970s

*P7. Owner and Address: Running Springs Water District, 31242 Hilltop Boulevard, Running Springs, CA 92382

*P8. Recorded by (Name, affiliation, & address): Hunter O'Donnell, CRM TECH, 1016 East Cooley Drive, Suite A/B, Colton, CA 92324

*P9. Date Recorded: March 14, 2024

*P10. Survey Type (describe): Intensive-level survey for CEQA compliance

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Bai "Tom" Tang, Frank Raslich, and Hunter O'Donnell (2024): Historical/Archaeological Resources Survey Report: ROWCO Reservoirs and Booster Replacement Project, Assessor's Parcel Numbers 0328-201-05 and -06, Running Springs Area, San Bernardino County, California

*Attachments: ☐ None ☒ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Resource Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 4

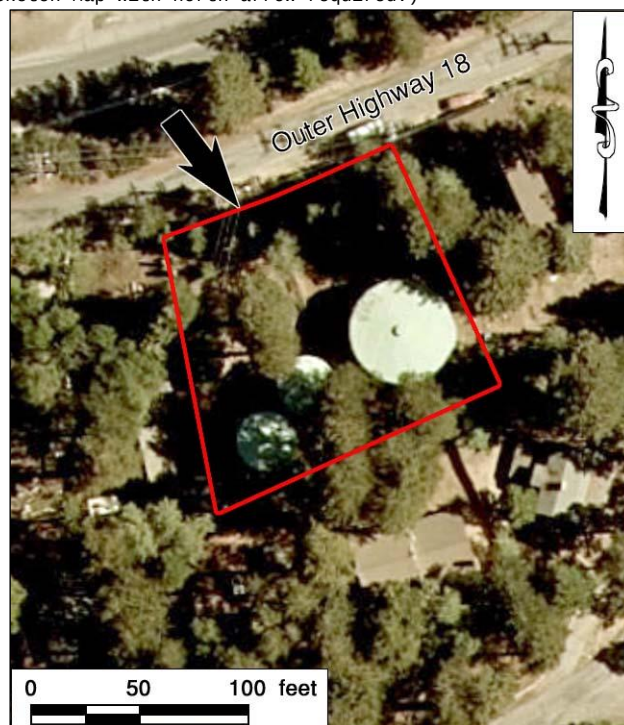
*NRHP Status Code 6Z

*Resource Name or # (Assigned by recorder) CRM TECH 4103-1H

- B1. Historic Name: ROWCO Water Facility B2. Common Name: Same
- B3. Original Use: Water reservoir tanks and pump station
- B4. Present Use: Same
- *B5. Architectural Style: N/A
- *B6. Construction History: (Construction date, alterations, and date of alterations) Historical maps and aerial photographs indicate that one of the smaller tanks was constructed between 1953 and 1966, around the time when the Running Springs Water District was formed in 1958, and the other two were added between 1966 and 1980. The earliest of the three may have predated the establishment of the water district. It was evidently built in association with the ROWCO development in Running Springs by Bill Baker in the late 1950s and was later absorbed into the water district.
- *B7. Moved? ☒ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____
- *B8. Related Features: See Item P3a.
- B9a. Architect: _____ b. Builder: _____
- *B10. Significance: Theme Post-WWII civic infrastructure development
- Area San Bernardino Mountains Period of Significance 1945-1980
- Property Type Water storage facility Applicable Criteria N/A
- (Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.) The construction of the reservoirs in the 1950s-1970s was evidently a result of the continued population growth in San Bernardino Mountain communities, with improved roads and post-World War II prosperity bringing new seasonal and permanent residents to the area. As one of the numerous similar facilities of similar vintages, however, it does not demonstrate a unique, significant, or particularly close association with that pattern of events or any other established historic theme, nor have any specific events or persons of recognized historic significance been identified in association with the reservoirs. (Continued on p. 4)
- B11. Additional Resource Attributes: (List attributes and codes) AH2: Structural remains
- B12. References: See Item P11.
- B13. Remarks: _____
- *B14. Evaluator: Hunter O'Donnell
- *Date of Evaluation: March 15, 2024

(This space reserved for official comments.)

(Sketch Map with north arrow required.)

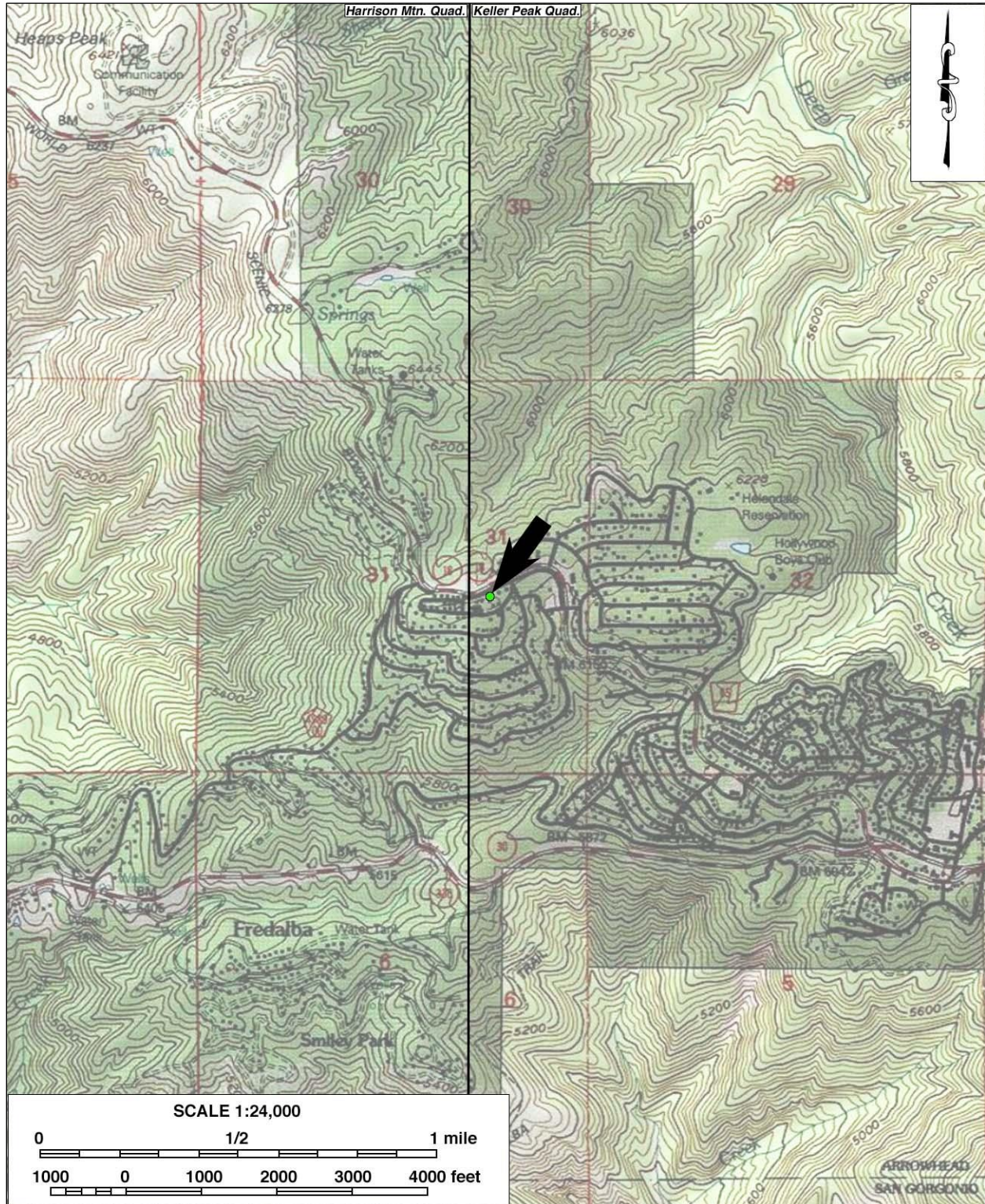


LOCATION MAP

*Map Name: Harrison Mtn and Keller Peak, Calif.

*Scale: 1:24,000

*Date of Map: 1988/1996



CONTINUATION SHEET

Primary # _____

HRI # _____

Trinomial _____

Page 4 of 4

Resource name or # (Assigned by recorder) CRM TECH 4103-1H

Recorded by: Hunter O'Donnell

*Date: March 15, 2024

√ Continuation Update

- *B10. Significance (continued):** As common infrastructure features of standard design and construction, the reservoirs do not embody the distinctive characteristics of any style, type, period, or method of construction. They are not known to represent the work of an important designer, builder, or engineer, nor do they exhibit any remarkable qualities in design, construction, engineering, or aesthetics. Dating to the late historic period, the ROWCO Water Facility holds little promise for important historical or archaeological data for the study of public utility works in the post-WWII era, a subject that is well documented in existing literature and archival records. Based on these considerations, the ROWCO Water Facility does not appear eligible for listing in the National Register of Historic Places or the California Register of Historical Resources.

APPENDIX 4
GEOTRACKER

APPENDIX 4 – GEOTRACKER

