

Draft

TEHACHAPI RECLAIMED WATER PROJECT

Initial Study/Mitigated Negative Declaration

Prepared for
City of Tehachapi

September 2024



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BIO	Biological Resources Technical Memorandum for the City of Tehachapi Reclaimed Water Project
Energy	Energy Calculations
GHG	Greenhouse Gas Calculations
NOI	Noise Calculations
TRIBAL	Native American Outreach

SECTION 1

Project Description

1.1 Introduction

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the location of land application of treated effluent for agricultural purposes within the City. To do this, the proposed project would construct a new pump station and approximate 1-mile pipeline to deliver treated wastewater effluent to the new agricultural area.

1.2 Project Location

The proposed project is located within unincorporated Kern County, in southeastern Kern County as shown on **Figure 1-1**. The City is approximately 35 miles southeast of the City of Bakersfield and 50 miles northwest of the City of Lancaster. The City lies in a mountainous area between the San Joaquin Valley and the Mojave Desert, at an elevation of approximately 3,970 feet above mean sea level (AMSL). It is surrounded by prominent hills and ridgelines to the north, west, and south.

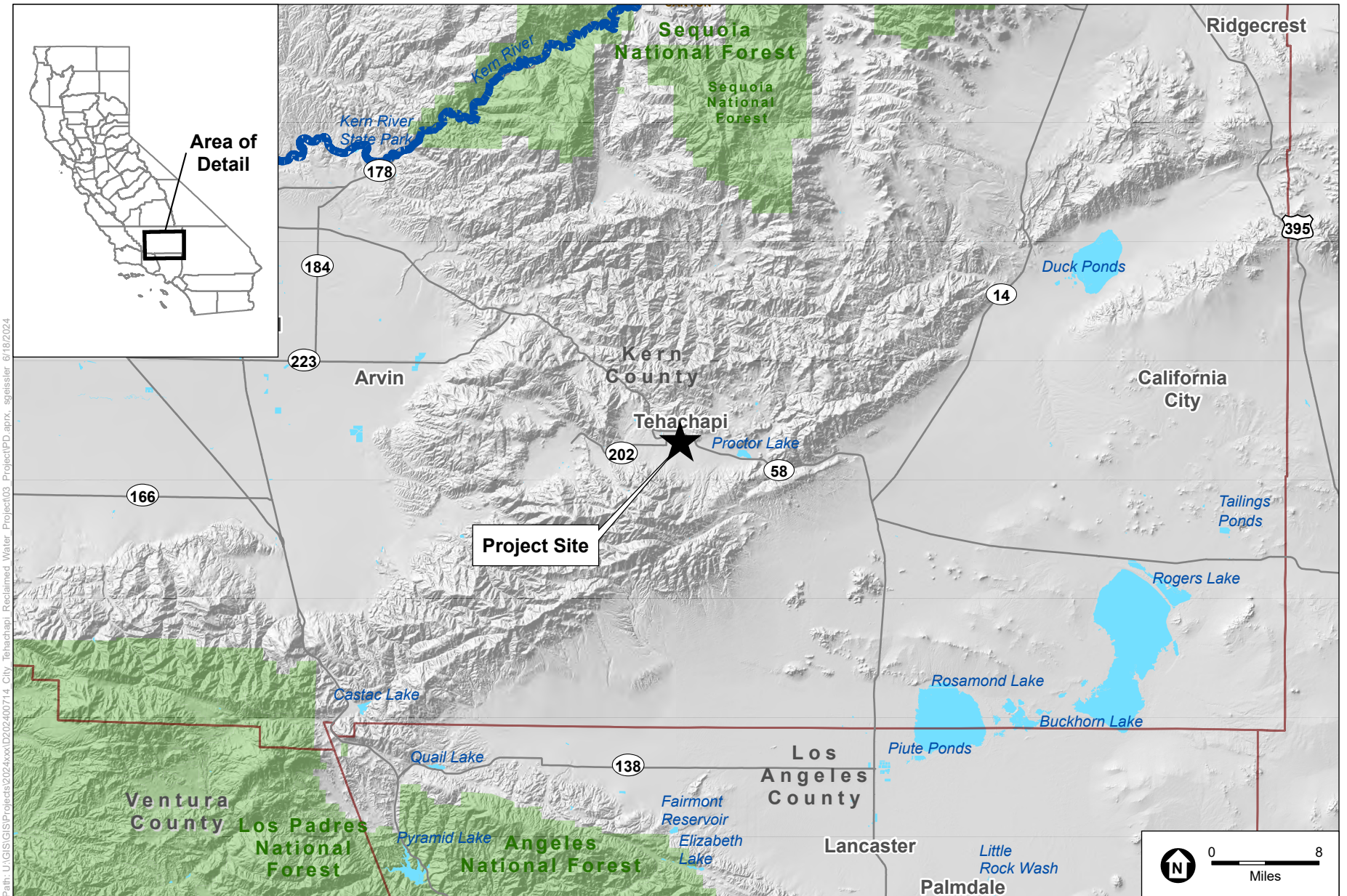
1.3 Project Background

The City owns and operates the existing wastewater treatment plant (WWTP) which receives, treats, and disposes of wastewater by land application, by discharging effluent to irrigate farmland (reclamation areas) north of Tehachapi Municipal Airport, temporary effluent storage in ponds onsite at the WWTP and at the Borrow Pit results in some inadvertent percolation into the groundwater basin. Treatment at the WWTP consists of primary treatment and secondary treatment provided by way of the head works, an oxidation ditch, a secondary clarifier, sludge drying beds, sludge dewatering facilities, and storage ponds. The WWTP design capacity is 1.25 million gallons per day (MGD), and the plant is currently operating at an average daily flow of approximately 0.65 MGD (2023).

Currently, approximately 220 acre-feet of treated effluent is applied to approximately 85 acres of reclamation areas north of Tehachapi Municipal Airport between the months of April and October each year. The City wishes to consolidate its agricultural practices, which are implemented in a non-consolidated manner, and provide area for more beneficial use of the airport property.

1.4 Project Objectives

The objectives of the proposed project are to change the location of land application of secondary treated effluent produced at the Tehachapi WWTP for the purpose of agricultural operations.



SOURCE: ESRI; National Hydrography Dataset; DWR

Tehachapi Reclaimed Water Project

Figure 1-1
Regional Location

1.5 Project Description

As part of the proposed project, the City would change the location of application of the secondary treated effluent produced at the Tehachapi WWTP from the agricultural fields near the Tehachapi Municipal Airport to a new location south of the Borrow Pit. Overall WWTP effluent production and WWTP throughput capacity would remain unchanged as would the time of year of application (from April to October).

As shown on **Figure 1-2**, an existing 12-inch force main would be used to convey the secondary-treated water to the Borrow Pit area. The proposed project would construct a new pump station at the Borrow Pit and a new pipeline to convey treated wastewater effluent from the existing Borrow Pit to the new agricultural turnout located at the southwest intersection of Steuber Road and Highline Road. The Borrow Pit pump station could be installed anywhere within the property boundary of the Borrow Pit and would include three 40-hp pumping units (configured for 2 duty 1 standby operation) mounted over a wet well. The pumps would be fed by 24-inch piping from the pit and discharge to the new 12-inch force main to the turnout.

The City will be required to adhere to California Water Code Title 22 Recycled Water Regulations contained in the Title 22 Engineering Report in effect for the Tehachapi WWTP.

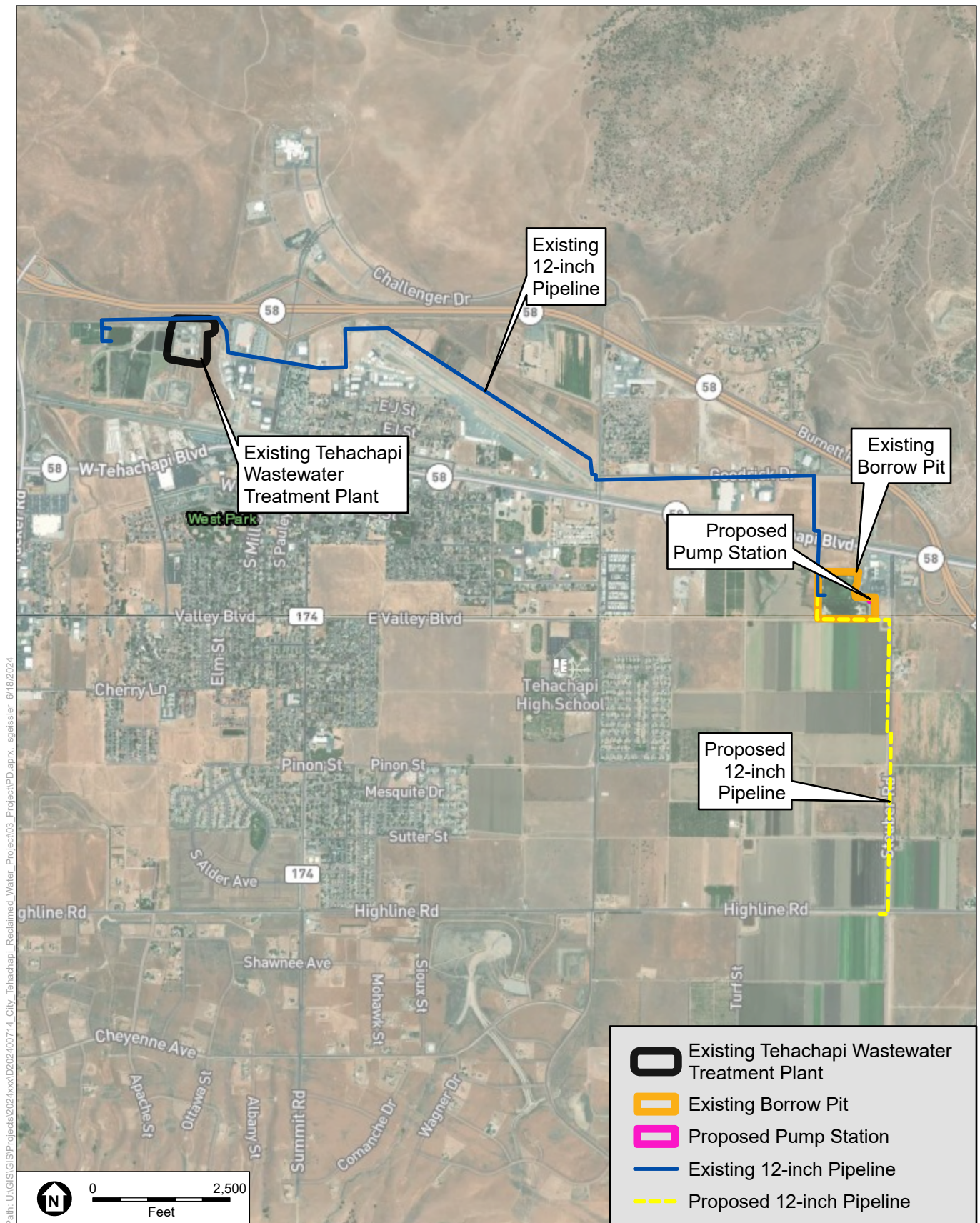
The City plans to lease the agricultural fields at the southwest intersection of Steuber Road and Highline Road to a third party. The third party would farm the agricultural fields similar to existing conditions using the treated wastewater effluent conveyed as part of this project. The land is zoned as Exclusive Agriculture by Kern County. In accordance with Kern County Zoning Ordinance Section 19.12.020.F, water storage or groundwater recharge facilities are authorized uses (Kern County Planning 2024). No farming activities are included as part of the project evaluated in this MND.

1.6 Project Construction

1.6.1 Conveyance Facilities

Pipeline

The proposed transmission pipeline would be installed within the rights-of-way of Steuber Road, and an existing dirt road. The construction equipment needed for pipeline installation would include: backhoe, excavator, loader, dump trucks, water trucks, pipe trailers, crew vehicles, shoring equipment, and plate compactor. Construction of the proposed transmission pipeline would involve conventional cut and cover trenching technique. The trenching activities would include saw cutting of the pavement where applicable, trench excavation, shoring, pipe installation, trench backfill and compaction, site restoration/pavement replacement, as applicable, and testing.



SOURCE: Mapbox, 2024; ESA, 2024

Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components

The pipelines would require trenching at depths up to 10 feet bgs while the pipeline would be installed at 3 feet bgs. The construction corridor would be wide enough to accommodate the trench and to allow for staging areas and vehicle access. Trenches would be backfilled at the end of each work day or temporarily closed by covering with steel trench plates. Although not expected, localized trench and pipeline dewatering may be required depending on location. Water collected from dewatering would be reused for dust control purposes during construction, as needed.

Excavated soils would be reused as backfill and otherwise disposed of offsite at a local disposal facility. It is estimated that approximately 250 cubic yards of soil may need to be disposed of offsite from installation of the pipeline.

Approximately 5 to 10 workers would be required during various phases of pipeline installation.

Work within roadways would potentially require partial closure of traffic lanes, however full closure of any right-of-way is not anticipated. Traffic control would be necessary during pipeline construction within roadways. Typically, two to four workers would be required for traffic control during pipeline installation. Equipment necessary for traffic control includes changeable message signs, delineators, arrow boards, and K-Rails.

Pump Stations and Other Appurtenant Facilities

The location of the pump station at the Borrow Pit is shown on Figure 1-2 but could be installed anywhere within the property boundary of the Borrow Pit. Construction of the pump station at the Borrow Pit would require a footprint of approximately 2,500 square feet and a maximum height of 14 feet aboveground. Construction would require use of the following pieces of equipment: backhoe, excavator, loader, dump trucks, water trucks, pipe trailers, crew vehicles, shoring equipment, and plate compactor. Construction would entail site clearing/preparation, grading, excavation and earth moving, installation of facilities, paving, testing, and start up. Installation of the facilities would involve excavation between the existing surface and 20 feet bgs. The aboveground pump stations would be finished with a non-reflective material and painted with an earth-tone color to blend in with the surrounding landscape and vegetation.

A total of up to 5 to 10 workers would be needed per day for construction activities associated with the pump stations.

1.6.2 Construction Staging

Construction staging areas, including for laydown and soil stockpiling, would be located within the construction easement along the proposed pipeline route.

1.6.3 Project Construction Schedule

Construction of the proposed pump station would take 5 months and the pipeline would take 4 months; it is assumed work could occur concurrently. Construction of the proposed project is anticipated to begin in March 2025 and conclude in September 2025 (after one month of construction close out). Construction would occur between 8 A.M. to 7 P.M. Monday through Friday. Weekend and nighttime construction is not expected.

1.7 Operation and Maintenance Activities

No new employees would be required to operate the pipeline and pump station at the Borrow Pit. Regular employees of the WWTP would periodically visit the pump station at the Borrow Pit for maintenance activities.

Once operational, the City will be required to adhere to California Water Code Title 22 Recycled Water Regulations contained in the Title 22 Engineering Report in effect for the Tehachapi WWTP for conveyance of treated effluent to the agricultural fields at the southwest intersection of Steuber Road and Highline Road.

1.8 Energy Consumption

The proposed project would require use of a new pump station at the Borrow Pit which would require consumption of approximately 530,000 kilowatt hours per year (kWh/yr). A new electrical line would be required to service the proposed pump station at the Borrow Pit.

1.9 Project Approvals

This Initial Study (IS)/Mitigated Negative Declaration (MND) has been prepared to meet all of the substantive and procedural requirements of CEQA (California Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 et seq.). Accordingly, the City is the Lead Agency for the proposed project. **Table 1-1** summarizes the project approvals and permit requirements from Responsible Agencies. This IS/MND may be used for future project approvals from other Responsible or Trustee Agencies.

**TABLE 1-1
APPROVALS AND DISCRETIONARY PERMITS POTENTIALLY REQUIRED**

Agency	Permits and Authorizations Potentially Required
State Water Resources Control Board, Division of Drinking Water	Potential revision to the Tehachapi WWTP's California Water Code Title 22 Recycled Engineering Report
Central Valley Regional Water Quality Control Board	Waste Discharge Requirement Amendment for change of place of reclaimed water Construction General Permit Discharge requirements during construction
East Kern Air Pollution Control District	Permit to Construct and Operate (standby generators)
City of Tehachapi	Encroachment/Building Permit
Kern County	Encroachment Permit

References

Kern County Planning and Natural Resources Department, 2024. Planning and Natural Resources Department review of proposed acquisition of property as to conformity with the adopted General Plan and Kern County Zoning Ordinance pursuant to Government Code Section 65402 for the purchase of purchase. April 18, 2024.

SECTION 2

Environmental Checklist

1. **Project Title:** Tehachapi Reclaimed Water Project
2. **Lead Agency Name and Address:** City of Tehachapi
115 S. Robinson Street, Tehachapi, CA 93561
3. **Contact Person and Phone Number:** Don Marsh, Public Works Director
(661) 822-2200
4. **Project Location:** City of Tehachapi and unincorporated Kern County
5. **Project Sponsor's Name and Address:** Same as Lead Agency
6. **General Plan Designation(s):** City of Tehachapi: Light Industrial
7. **Zoning:** City of Tehachapi: Light-Industrial (M-1)
8. **Description of Project:** (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

The proposed project would change the location of application of the secondary treated effluent produced at WWTP from the agricultural fields near the Tehachapi Municipal Airport to a new location south of the Borrow Pit. An existing 12-inch force main would be used to convey the secondary-treated water to the Borrow Pit area. The proposed project would construct a new pump station at the Borrow Pit and a new pipeline to convey treated wastewater effluent from the existing Borrow Pit to the new agricultural turnout located at the southwest intersection of Steuber Road and Highline Road.
9. **Surrounding Land Uses and Setting.** (Briefly describe the project's surroundings.)

The project components are surrounded by rural agricultural lands in the City of Tehachapi and unincorporated portions of Kern County.
10. **Other public agencies whose approval is required** (e.g., permits, financing approval, or participation agreement.)

All permits and approvals are listed in Table 1-1 in Section 1, *Project Description*.
11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**

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 21080.3.2.) 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.

No, see Section 2.2.18, *Tribal Cultural Resources*, below.

2.1 Environmental Factors Potentially Affected

The environmental factors checked below include impacts that are “Less Than Significant with Mitigation Incorporated.” There are no environmental factors that have an impact that is identified as a “Potentially Significant Impact” because all potential significant impacts can be reduced to less than significant with the incorporation of mitigation measures.

- | | | |
|--|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology/Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials |
| <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities/Service Systems | <input checked="" type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial study:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature



Date

9-25-24

2.2 Environmental Checklist

2.2.1 Aesthetics

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

Discussion

a) Construction

A scenic vista is generally regarded as a viewpoint that provides a distant view of highly valued natural or manmade landscape features for the benefit of the public. Scenic vistas visible from the project area include the Tehachapi Mountains to the south and views of the Sierra Nevada mountain range and the San Emigdio Mountain range to the north. Although there are no scenic vistas listed for the project area in City planning documents, the City of Tehachapi Natural Resources Element includes policies for preservation of “viewsheds” that contribute to the scenic quality of Tehachapi, including public views of surrounding natural environments, such as mountain ranges and agricultural lands, and in-town streetscapes (City of Tehachapi 2012).

Construction of the proposed project could temporarily disrupt public views of surrounding mountain ranges and agricultural lands due to the presence of construction equipment for approximately 6 months. The construction activities would occur in phases and would not be in one location for the entire construction duration; therefore, impacts would be less than significant.

Operation

Once operational, the proposed transmission pipeline would be located underground and would not be visible within the surrounding natural environment. The proposed project would involve installation of an aboveground pump station that could be installed up to 14 feet above the ground surface. The pump station would be installed in a rural environment and could impact the “viewsheds” that contribute to the scenic quality of Tehachapi, including nearby agricultural lands and mountain ranges that comprise scenic vistas. In order to ensure the aboveground pump station do not impact scenic vistas, the City of Tehachapi would finish these facilities with a non-reflective material and paint with an earth-tone color to blend in with the surrounding landscape

and vegetation. With implementation of this project design feature, impacts to scenic vistas would be reduced to a less than significant level.

b) Construction and Operation

There are no identified scenic resources, trees, rock outcroppings, or historic buildings on or near the project site. The California Department of Transportation (Caltrans) State Scenic Highway Program has not designated any State Scenic Highways near the proposed project (Caltrans 2019). The City of Tehachapi General Plan states in its Natural Resources Element that the City supports Kern County's efforts to make a segment of State Route 58 (SR-58) that runs east-west north of the project site a scenic highway (City of Tehachapi 2012). However, no scenic designation of SR-58 portions in the project vicinity has been made by Caltrans. Construction and operation of the project would not damage scenic resources as there are no identified scenic resources or State Scenic Highways on or near the project site. As a result, impacts to scenic resources within a state scenic highway would be less than significant.

c) Construction

The proposed project is in a rural area characterized by surrounding agricultural fields and public roads. As described above, construction of the proposed project facilities would temporarily be visible during the 6-month construction schedule and from surrounding public roads and vantage points and would not result in a significant impact.

Operation

Once built and operational, the proposed transmission pipeline would be located underground and would not be visible. The proposed aboveground pump station at the Borrow Pit would introduce contrasting elements into the visual landscape that could negatively affect visual character or quality given the rural and agricultural. With implementation of the project design feature mentioned above that would finish facilities in a non-reflective material and paint with an earth-tone color, aboveground facilities would blend in with the surrounding area to minimize contrasting features in the visual landscape. With implementation of this project design feature, impacts to visual character and quality would be reduced to a less than significant level.

d) Construction

Construction of proposed project would occur between 8 A.M. to 7 P.M. Monday through Friday and would not involve nighttime construction or introduce new sources of light and glare.

Operation

Once built and operational, no permanent lighting would be installed at any of the project facilities that could impact neighboring land uses or substantially contribute to light pollution in the project area. No impact would occur.

References

California Department of Transportation (Caltrans). 2019. List of Eligible and Officially Designated State Scenic Highways. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>, accessed June 26, 2024.

City of Tehachapi. 2012. General Plan.

<https://www.liveuptehachapi.com/DocumentCenter/View/3184/Combined-General-Plan-2015-reduced?bidId=>, accessed June 26, 2024.

2.2.2 Agriculture and Forestry Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a) Construction and Operation

According to Important Farmland Maps prepared by the California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP), portions of the transmission pipeline proposed along Valley Boulevard, Steuber Road, and an existing dirt road, in addition to the new turnout, would be located in areas where adjacent land uses include Unique Farmland and Prime Farmland (DOC 2022). However, pipeline construction activities would occur within existing roadway rights-of-way, and construction staging areas would be located within the construction easement along the proposed pipeline route. Thus, installation and operation of the proposed transmission pipeline would not interfere with surrounding agricultural uses. All other project components including the pump station and other appurtenant facilities would occur within Grazing Land or Urban and Built-Up Land (DOC 2022). Therefore, the proposed project would not convert Farmland to non-agricultural use. No impact would occur.

b) Construction and Operation

The City of Tehachapi General Plan identifies Williamson Act Land in the City's Sphere of Influence. No Williamson Act Land exists where the proposed project would be implemented (City of Tehachapi 2012). As described above in *Agriculture and Forestry Resources Impact* (a),

adjacent agricultural land uses along the proposed pipeline route would not be affected during installation or operation of project facilities. Therefore, no impacts to zoning for agricultural use or Williamson Act contracts would occur.

c, d) **Construction and Operation**

City of Tehachapi and Kern County zoning maps do not identify forest lands in the vicinity of the proposed project (City of Tehachapi 2021; County of Kern 2022). Therefore, the construction and operation of the proposed project would not conflict with existing zoning for, or cause rezoning of, forest land nor result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

e) **Construction and Operation**

As described above in *Agriculture and Forestry Resources* Impact (a), adjacent agricultural land uses along the proposed pipeline route would not be affected during installation or operation of project facilities. No impact would occur.

References

California Department of Conservation (DOC). 2022. California Important Farmland Finder. <https://maps.conservation.ca.gov/DLRP/CIFF/>, accessed June 26, 2024.

City of Tehachapi. 2012. General Plan. <https://www.liveuptehachapi.com/DocumentCenter/View/3184/Combined-General-Plan-2015-reduced?bidId=>, accessed June 26, 2024.

_____. 2021. Zone Map. <https://www.liveuptehachapi.com/DocumentCenter/View/6098/X1331-1-ZONE-MAP-overall> accessed June 26, 2024.

County of Kern. 2022. Kern County Interactive GIS Mapping Tool. <https://kernplanning.com/general-plan-update/interactive-maps/>, accessed June 26, 2024.

2.2.3 Air Quality

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
III. AIR QUALITY —				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a) Construction and Operation

In general, a project would not interfere with the applicable air quality plan if it would be consistent with growth assumptions used during preparation of the applicable air quality plan and if the project implements all reasonably available and feasible air quality control measures. The consistency of the proposed project with the applicable Air Quality Management Plans (AQMPs) is discussed below. The AQMPs that are applicable to the proposed project include the 2003 East Kern Ozone Attainment Demonstration, Maintenance Plan and Redesignation Request, the 2023 RACT SIP, and the 2023 Ozone Attainment Plan. The proposed project is located in the Mojave Air Basin (Air Basin) in the jurisdictional region of the Eastern Kern Air Pollution Control District (EKAPCD).

The National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety, and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. As the scientific methods for the study of air pollution health effects have progressed over the past decades, adverse effects have been shown to occur at lower levels of exposure. For some pollutants, no clear thresholds for effects have been demonstrated. New findings over time have, in turn, led to the revision and lowering of NAAQS which, in the judgment of the U.S. Environmental Protection Agency (USEPA), are necessary to protect public health. Under the California Clean Air Act (CCAA) that requires all areas of the state to achieve and maintain the CAAQS by the earliest practicable date, the California Air Resources Board (CARB) is required to designate areas of the State as attainment, non-attainment, or unclassified based on whether or not the state standards have been achieved. An “attainment” designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A “non-attainment” designation indicates that a pollutant concentration violated the applicable standard at least once, excluding occasional violations by

exceptional events that are natural or unusual events that can overwhelm existing strategies designed to control man-made pollution such as wildfires (and resulting smoke), high winds and dust, volcanic activities, stratospheric ozone intrusions, and fireworks. The non-attainment designation can be further classified as serious non-attainment, severe non-attainment, or extreme non-attainment, with extreme non-attainment being the most severe of the classifications depending on the frequency and severity of pollutants exceeding applicable standards. An “unclassified” designation signifies that the data does not support either an attainment or non-attainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The Environmental Protection Agency (EPA) designates areas for ozone, Carbon Monoxide (CO), and Nitrogen Dioxide (NO₂) as “does not meet the primary standards,” “cannot be classified,” or “better than national standards.” For Sulfur Dioxide (SO₂), areas are designated as “does not meet the primary standards,” “does not meet the secondary standards,” “cannot be classified,” or “better than national standards” with respect to the NAAQS. However, the CARB terminology of attainment, non-attainment, and unclassified is more frequently used. The EPA uses the same sub-categories for non-attainment status: serious, severe, and extreme. In 1991, EPA assigned new non-attainment designations to areas that had previously been classified as Group I, II, or III for PM₁₀ based on the likelihood that they would violate national PM₁₀ standards. All other areas are designated “unclassified.”

The CAAQS and the NAAQS are provided in **Table 2-1** and the attainment status designations pertaining to the EKAPCD are summarized in **Table 2-2**. The EKAPCD portion of the Air Basin is currently designated as a non-attainment area with respect to the CAAQS for the ozone and PM₁₀. The Air Basin is in attainment for all other State-regulated criteria pollutants.

The EKAPCD portion of the Air Basin (excluding the Indian Wells Valley and Kern River/Cummings Valley area), is currently designated as a severe non-attainment area with respect to the NAAQS for ozone (8-hour). The portion of the Air Basin in which the proposed project is located is designated as unclassifiable/attainment for all other EPA-regulated criteria pollutants.

In addition to criteria pollutants, the EPA and the State of California regulate hazardous air pollutants, also known as toxic air pollutants or air toxics, which are pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. A TAC is defined by California Health and Safety Code Section 39655 as follows:

“Toxic air contaminant” means an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412(b)) is a toxic air contaminant.

**TABLE 2-1
NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards ^a	National Standards ^b		
		Concentration ^c	Primary ^{c,d}	Secondary ^{c,e}	
O ₃ ^f	1 Hour 8 Hour	0.09 ppm (180 µg/m ³) 0.070 ppm (137 µg/m ³)	— 0.070 ppm (137 µg/m ³)	Same as Primary Standard	
NO ₂ ^g	1 Hour Annual Arithmetic Mean	0.18 ppm (339 µg/m ³) 0.030 ppm (57 µg/m ³)	100 ppb (188 µg/m ³) 53 ppb (100 µg/m ³)	None Same as Primary Standard	
CO	1 Hour 8 Hour	20 ppm (23 mg/m ³) 9.0 ppm (10 mg/m ³)	35 ppm (40 mg/m ³) 9 ppm (10 mg/m ³)	None	
SO ₂ ^h	1 Hour 3 Hour 24 Hour Annual Arithmetic Mean	0.25 ppm (655 µg/m ³) — 0.04 ppm (105 µg/m ³) —	75 ppb (196 µg/m ³) — 0.14 ppm (for certain areas) _h 0.030 ppm (for certain areas) _h	— 0.5 ppm (1300 µg/m ³) — —	
PM10 ⁱ	24 Hour Annual Arithmetic Mean	50 µg/m ³ 20 µg/m ³	150 µg/m ³ —	Same as Primary Standard	
PM2.5 ⁱ	24 Hour Annual Arithmetic Mean	No Separate State Standard 12 µg/m ³	35 µg/m ³ 12.0 µg/m ³ ⁱ	Same as Primary Standard 15 µg/m ³	
Lead ^{j,k}	30 Day Average Calendar Quarter Rolling 3-Month Average ^k	1.5 µg/m ³ — —	— 1.5 µg/m ³ (for certain areas) _k 0.15 µg/m ³	Same as Primary Standard	
Visibility Reducing Particles ^l	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more due to particles when relative humidity is less than 70 percent.	No Federal Standards		
Sulfates (SO ₄)	24 Hour	25 µg/m ³	No Federal Standards		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	No Federal Standards		
Vinyl Chloride ^j	24 Hour	0.01 ppm (26 µg/m ³)	No Federal Standards		

SOURCE: CARB, Ambient Air Quality Standards, May 4, 2016

NOTES:

- California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and 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.
- National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site 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 micrograms/per cubic meter (µg/m³) 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 three years, are equal to or less than the standard.
- Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

Pollutant	Average Time	California Standards ^a	National Standards ^b	
		Concentration ^c	Primary ^{c,d}	Secondary ^{c,e}

d. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

e. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

g. 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.

h. 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 non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

i. On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³.

j. CARB 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.

k. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

l. In 1989, CARB 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 2-2
ATTAINMENT STATUS FOR THE EKAPCD PORTION OF THE MOJAVE DESERT AIR BASIN^a

Pollutant	National Standards (NAAQS)	California Standards (CAAQS)
O ₃ (1-hour standard)	Attainment ^b	Non-attainment
O ₃ (8-hour standard) ^c	Severe Non-attainment	Non-attainment
CO	Unclassifiable/Attainment	Unclassified
NO ₂	Unclassified	Attainment
SO ₂	Unclassified	Attainment
PM ₁₀	Unclassifiable/Attainment	Non-attainment
PM _{2.5}	Unclassifiable/Attainment	Unclassified
Lead (Pb)	Unclassifiable/Attainment	Attainment

SOURCE: EKAPCD, 2024

NOTES:

a. Excluding the Kern River/Cummings Valleys and Indian Wells Valley Planning Areas

b. 1-hour ozone NAAQS was revoked effective June 15, 2004. EKAPCD was in attainment for 1-hour ozone NAAQS at time of revocation; the proposed Attainment Maintenance designation's effective date was June 21, 2004, therefore it did not become effective. c. Attainment for 1997, 8-hour Ozone NAAQS (80 ppb), Severe Nonattainment for 2008 (75 ppb) and 2015 (70 ppb) Nonattainment for State 8-hour standard (70 ppb).

Diesel particulate matter, which is emitted in the exhaust from diesel engines, was listed by the State as a toxic air contaminant in 1998. Most major sources of diesel emissions, such as ships, trains, and trucks operate in and around ports, railyards, and heavily traveled roadways. These areas are often located near highly populated areas resulting in greater health consequences for urban areas than rural areas (CARB 2024). Diesel particulate matter has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. Diesel particulate matter consists of fine particles (fine particles have a diameter <2.5 µm), including a subgroup of ultrafine particles (ultrafine particles have a diameter <0.1 µm). Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible

emissions in diesel exhaust include carbon particles or “soot.” Diesel exhaust also contains a variety of harmful gases and cancer-causing substances.

Exposure to diesel particulate matter may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Diesel particulate matter levels and resultant potential health effects may be higher in proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, diesel particulate matter exposure may lead to the following adverse health effects: (1) aggravated asthma; (2) chronic bronchitis; (3) increased respiratory and cardiovascular hospitalizations; (4) decreased lung function in children; (5) lung cancer; and (6) premature deaths for people with heart or lung disease (CARB 2024; CARB 2008).

Significance Criteria

The EKAPCD adopted its Guidelines for Implementation of CEQA of 1970, as Amended to set forth the District’s definitions, procedures and forms used in implementation of the Act (EKAPCD 1999). The EKAPCD guidelines state that a proposed project is determined to not have significant air quality impacts if operation of the proposed project would:

1. Emit (from all project sources subject to KCAPCD Rule 201) less than offsets trigger levels set forth in Subsection III.B.3. of KCAPCD's Rule 210.1 (New and Modified Source Review Rule);¹
2. Emit less than 137 pounds per day of NO_x or Reactive Organic Compounds² from motor vehicle trips (indirect sources only);
3. Not cause or contribute to an exceedance of any California or National Ambient Air Quality Standard;
4. Not exceed the District health risk public notification thresholds adopted by the KCAPCD Board; and
5. Be consistent with adopted federal and State Air Quality Attainment Plans.

To assist local jurisdictions in the evaluation of air quality impacts, the EKAPCD established thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts (EKAPCD 2006). Accordingly, the recommended thresholds of significance are used to determine whether implementation of the proposed project would result in a significant air quality impact. Projects

¹ A new or modified stationary source of NO_x, VOC, PM10 or SO_x shall provide offsets for the New and Modified Stationary Source Review (NSR) when the NSR balance, equals or exceeds the following offset trigger levels; and a new or modified stationary source of NO_x and VOC shall provide offsets for the source's potential to emit when the source's potential to emit equals or exceeds the following offset trigger levels: PM10: 15 tons/yr; SO_x (as SO₂): 27 tons/yr; VOC: 25 tons/yr NO_x (as NO₂): 25 tons/yr After a stationary sources NSR balance and/or stationary source potential to emit equals or exceeds these trigger levels and offsets have been provided fully 210.1-10 offsetting the NSR balance or the stationary source potential to emit, any additional future increase shall be offset.

² Includes reactive organic gases (ROGs) which is used interchangeably as volatile organic compounds (VOCs) (CARB 2004).

that exceed these recommended thresholds would be considered to have a potentially significant impact to human health and welfare. The thresholds of significance are summarized as follows:

- EKAPCD thresholds for construction and operational sources (including stationary sources):
 - Reactive Organic Gases (ROG) emissions of 25 tons per year (tpy)
 - Oxides of nitrogen (NOX) emissions of 25 tpy
 - Sulfur Oxide (SOX) emissions of 27 tpy
 - Particulate matter (PM10) emissions of 15 tpy

Air Quality Management Plans/State Implementation Plans

As required by the federal CAA and CCAA, air basins or portions thereof have been classified as either “attainment” or “non-attainment” for each criteria air pollutant based on whether or not the standards have been achieved. Jurisdictions of non-attainment areas are also required to prepare an air quality management plan (AQMP) that includes strategies for achieving attainment. The following AQMPs have been adopted by EKAPCD and submitted to CARB as part of California’s SIP.

2003 Ozone Attainment Demonstration, Maintenance Plan, and Redesignation Request

On January 9, 2003, EKAPCD adopted the East Kern Ozone Attainment Demonstration, Maintenance Plan and Redesignation Request for the East Kern County non-attainment area. On May 1, 2003, the EKAPCD Board adopted amendments to the January 2003 plan and on December 9, 2003, CARB adopted and submitted the amended plan to USEPA. The 2003 Ozone Attainment Demonstration, Maintenance Plan, and Redesignation Request primarily addresses the 1-hour O₃ NAAQS.

2023 Reasonably Available Control Technology SIP

As a severe O₃ non-attainment area, EKAPCD is required to adopt Reasonably Available Control Technology (RACT) rules for all sources of O₃ precursor emissions (NO_x and VOCs). EKAPCD has fulfilled this mandate by adopting a number of rules between 1972 and 2022 which aim to reduce O₃ precursor emissions. The EKAPCD adopted the Reasonably Available Control Technology SIP for the 2008 and 2015 8-hour Ozone NAAQS (2023 RACT SIP) on July 27, 2023 (EKAPCD 2023b). CARB submitted the 2023 RACT SIP to the USEPA as a revision to the California SIP on October 25, 2023.

2023 Ozone Attainment Plan

The EKAPCD is in non-attainment for the national and State 8-Hour O₃ standard and the State 1-hour O₃ standard. Accordingly, in 2023 the EKAPCD adopted an attainment plan to meet the national and State standards for O₃ pursuant to existing mandates. On June 22, 2023, CARB approved the EKAPCD 2023 Ozone Plan for the 2008 and 2015, 8-Hour Ozone NAAQS (2023 Ozone Attainment Plan). The District Board adopted the 2023 Ozone Attainment Plan at a public hearing on May 4, 2023 (EKAPCD 2023a). The Plan showed significant progress toward reduced O₃ within the district. However, the attainment status of the district has not changed and the O₃ attainment plan remains in effect. The 2023 Ozone Attainment Plan addressed all required elements, emissions reductions, and control measures necessary to demonstrate attainment with the 2008 8-hour Ozone NAAQS by 2027 and 2015 8-hour Ozone NAAQS by 2033.

Applicable State Rules

The California Air Toxics Program is an established two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification step, CARB and OEHHA determine if a substance should be formally identified, or “listed,” as a TAC in California. In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on results of that review, CARB has promulgated a number of Airborne Toxic Control Measures (ATCMs), both for stationary and mobile sources, including On-Road and Off-Road Vehicle Rules. These ATCMs include measures such as limits on heavy-duty diesel motor vehicle idling and emission standards for off-road diesel construction equipment in order to reduce public exposure to DPM and other TACs. These actions are also supplemented by the AB 2588 Air Toxics “Hot Spots” program and SB 1731, which require facilities to report their air toxics emissions, assess health risks, notify nearby residents and workers of significant risks if present, and reduce their risk through implementation of a risk management plan.

Applicable EKAPCD Rules

Rule 201. Permits Required

Rule 201 establishes the required permit for the Authority to Construct: Any person building, altering or replacing any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants, shall first obtain authorization for such construction from the Control Officer; Rule 201 also establishes the required permit for the Permit to Operate: Before any new or modified equipment or any existing equipment so described may be operated, a written permit shall be obtained from the Control Officer. No Permit to Operate shall be granted either by the Control Officer or the Hearing Board for any equipment described under the Authority to Construction shall be constructed or installed without authorization, until the information required is presented to the Control Officer and such equipment is altered, if necessary, and made to conform to standards.

Rule 210.1 New and Modified Stationary Source Review

Rule 210.1 establishes stationary source offset levels for new and modified stationary sources³ of air pollutants. Under this rule, the EKAPCD has established required offsets for when the emissions from a source exceed the following levels:

- PM₁₀ – 15 tons/year
- SO_x (as SO₂) – 27 tons/year
- VOCs – 25 tons/year
- NO_x (as NO₂) – 25 tons/year

³ Stationary Source: any structure, building, facility, or installation which emits or may emit any affected pollutant directly, or as a fugitive emission. "Structure, building, facility or installation" includes all pollutant emitting activities, including emissions units: 1. Located on one or more contiguous or adjacent properties; 2. Under the same or common ownership or entitlement to use, or owned or operated by entities under common control; and 3. Belonging to the same industry either by being within the same two-digit Standard Industrial Classification Code; or 4. By being part of a common industrial process, manufacturing process, or connected process involving a common raw material.

Rule 401 Visible Emissions

Rule 401 states that a person shall not discharge into the atmosphere, from any single source of emissions whatsoever, any air contaminant from any single emissions source for a period or periods aggregating more than 3 minutes in any 1 hour which is:

- As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.
- Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Subsection A [of the Rules].

Rule 402 Fugitive Dust

Rule 402 addresses significant man-made dust sources from active operations. An active operation is defined as "Activity capable of generating fugitive dust, including any open storage pile, earth-moving activity, construction/demolition activity, disturbed surface area, and non-emergency movement of motor vehicles on unpaved roadways and any parking lot served by an unpaved road subject to this Rule." Rule 402 applies to specified bulk storage, earthmoving, construction and demolition, and man-made conditions resulting in wind erosion, and includes the following requirements:

- A person shall not cause or allow emissions of fugitive dust from any active operation to remain visible in the atmosphere beyond the property line of the emission source.
- A person shall utilize one or more Reasonably Available Control Measures (RACM) or Bulk Material Control Measures (BMCM) to minimize fugitive dust emissions from each source type that is part of any active operation, including unpaved roadways.
- No person shall conduct a large operation without filing for and obtaining an approved fugitive dust emission control plan. Large operation is defined as "Any construction activity on any site involving 10 or more contiguous acres of disturbed surface area, or any earthmoving activity exceeding a daily volume of 10,000 cubic yards, or relocating more than 2,500 cubic yards per day of bulk materials at least three days per year."
- EKAPCD may require on-site PM₁₀ monitoring for any large operation that causes downwind PM₁₀ ambient concentrations to increase more than 50 micrograms per cubic meter above upwind concentrations as determined by utilizing high-volume particulate matter samplers, or other USEPA-approved equivalent method(s).

Applicable General Plan Policies

The City of Tehachapi implements the following policies that are applicable to its efforts to improve air quality (City of Tehachapi 2012).

Natural Resources Element

Policy NR-3. Reduce emissions for stationary point sources of air pollution (e.g., equipment at commercial and industrial facilities) and stationary area sources (e.g., wood-burning fireplaces & gas powered lawn mowers) which cumulatively, represent large quantities of emissions.

- a. Work with the Air Quality Management District to achieve emission-reductions for non-attainment pollutants including carbon monoxide, ozone and PM-10;

- b. Apply CEQA to evaluate and mitigate the local and cumulative effects of new development on air quality.

The proposed project would construct a new pump station and a new pipeline to convey treated wastewater effluent. No new employees would be required to operate the pipeline and pump station and regular employees of the current WWTP would periodically visit the pump station for maintenance activities. The proposed project would not introduce a land use that would induce population or housing that would result in an increase in vehicle miles traveled (VMT) and associated criteria pollutant emissions. As such, the proposed project would be consistent with the growth assumptions of the AQMPs.

The proposed project would be required to incorporate and comply with all applicable EKAPCD rules and regulations to reduce fugitive dust emissions. The proposed project would comply with Rule 402, Fugitive Dust, during construction activities, which requires control of fugitive dust from certain unpaved roadways, bulk storage piles, construction and demolition projects, and land leveling and clearing projects. Additionally, the proposed project would comply with EKAPCD Rule 201 and 210.1 that establishes permit conditions and sets forth the thresholds of significance by which stationary source projects are evaluated.⁴

The unmitigated emissions generated by the proposed project would not result in emissions of criteria pollutants that exceed the significance thresholds established by the EKAPCD for implementing CEQA, including PM₁₀, PM_{2.5}, and fugitive dust. In addition, as described above, no new employees would be required for project operations to operate the pipeline and pump station and maintenance activities would be performed by current employees of the WWTP. Furthermore, operation of the pump station and pipeline does not generate area or energy emissions associated with hearths, consumer products, architectural coating, landscaping equipment or natural gas usage. As such, the proposed project would not generate operational emissions. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality attainment plans. The proposed project would be consistent the air quality plan because it would be consistent with growth assumptions used to form the applicable AQMPs; implement all applicable and reasonably available and feasible air quality control measures; and not exceed the EKAPCD thresholds of significance. Therefore, the impact would be less than significant.

b) **Construction and Operation**

The proposed project would result in the emission of criteria pollutants during both construction and operation, including those for which the project area is in non-attainment. As described above, the Air Basin is in non-attainment or severe nonattainment for ozone and PM₁₀, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. With respect to cumulative health impacts, the NAAQS and CAAQS were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and persons with pre-existing respiratory or cardiovascular illnesses). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals

⁴ In addition, the proposed project would be required to comply with Rules 401, 419 and 423 regarding visible, nuisance and hazardous air pollutants and contaminants.

in the population would experience adverse health effects. Since the Air Basin is already in non-attainment for these constituents, it is considered to have an existing significant cumulative health impact without the proposed project. However, the focus of this analysis is whether the proposed project's contribution to the existing violation of air quality standards is cumulatively considerable.

The EKAPCD has determined that projects that exceed regional thresholds would have a cumulatively considerable health impact. Construction emissions were calculated for the proposed project by using the California Emissions Estimator Model (CalEEMod) Version 2022.1. CalEEMod is the recommended emissions inventory software program that can be used to estimate anticipated emissions associated with land development projects in California. CalEEMod has separate databases for specific counties and air districts. The Kern County database in CalEEMod was used for the proposed project. On-road mobile source emissions were estimated using CalEEMod that incorporates the CARB on-road vehicle emissions factor (EMFAC) model. As described in Section 1, *Project Description*, of this IS/MND, the proposed project components would be constructed concurrently for the proposed project conveyance facilities including the pump station and the transmission pipeline (including turnout). Each component would require construction phases including: site preparation, grading/excavation, trenching/shoring, building construction, site restoration, paving and testing/start up that require various amounts of heavy-duty construction equipment and associated worker, haul and vendor truck trips (see Section 1, *Project Description*, and **Appendix AQ**, for additional details). **Table 2-3** includes project construction generated emissions for year 2025, which is the earliest year the proposed project could begin construction. As shown, the proposed project's construction emissions would not exceed the EKAPCD's significance thresholds.⁵

In addition, as described above, no new employees would be required for project operations to operate the pipeline and pump station and maintenance activities would be performed by current employees of the WWTP. Furthermore, operation of the pump station and pipeline does not generate area or energy emissions associated with hearths, consumer products, architectural coating, landscaping equipment or natural gas usage. As such, the proposed project would not generate operational emissions. Therefore, in accordance with EKAPCD policy, the proposed project's cumulatively considerable impacts would be less than significant.

⁵ As shown Table 2-3 construction emissions would not exceed the EKAPCD regional significance thresholds for attainment, maintenance, or unclassifiable criteria air pollutants. With respect to the State-identified criteria pollutants (i.e., sulfates, hydrogen sulfide, visibility reducing particles, and vinyl chloride), the Project would either not emit them (i.e., hydrogen sulfide and vinyl chloride) or they would be accounted for as part of the pollutants estimated in this analysis (i.e., sulfates and visibility reducing particles). For example, visibility reducing particles are associated with particulate matter emissions and sulfates are associated with SO₂ emissions. Both particulate matter and SO₂ are included in the emissions estimates for the Project.

TABLE 2-3
ESTIMATED MAXIMUM REGIONAL CONSTRUCTION EMISSIONS (TONS PER YEAR) – YEAR 2025 ^A

Source	VOC	NO _x	CO	SO ₂	PM10	PM2.5
Conveyance Facilities - Pipeline	0.065	0.488	0.618	0.001	0.031	0.020
Conveyance Facilities - Pump Station	0.078	0.598	0.749	0.002	0.041	0.026
Total Annual Emissions	0.143	1.086	1.367	0.003	0.072	0.046
EKAPCD Threshold^b	25	25	NA	27	15	15
Exceeds Thresholds?	No	No	No	No	No	No

SOURCE: ESA 2024

NOTES:

- a. Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix AQ of this IS/MND.
- b. The EKAPCD has not established a threshold for PM2.5; however, since the EKAPCD region is designated non-attainment for PM10 and unclassified for PM2.5, and PM2.5 is a subset of PM10, 15 tons per year is used for PM2.5.

c) Construction and Operation

Certain population groups are especially sensitive to air pollution and should be given special consideration when evaluating potential air quality impacts. These population groups include children, the elderly, persons with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise.

The EKAPCD considers a sensitive receptor a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The closest existing off-site sensitive receptors to the proposed project components are single-family homes located along Steuber Road, which would be adjacent to the proposed transmission pipeline that would be installed along Steuber Road. The same sensitive receptors would be approximately 625 feet from the southeast corner of the Borrow Pit where the proposed pump station would be constructed. The nearest school to any component of the proposed project are Jacobsen Middle School and Tehachapi High School, located approximately 0.75 miles northeast and 0.75 miles east, respectively, of the proposed pipeline.

As shown in Table 2-3, the proposed project's construction and emissions would not exceed the EKAPCD's thresholds established in accordance with health-based standards for determining significance of criteria pollutant emissions. In addition, as described above, no new employees would be required for project operations to operate the pipeline and pump station and maintenance activities would be performed by current employees of the WWTP. Furthermore, operation of the pump station and pipeline does not generate area or energy emissions associated with hearths, consumer products, architectural coating, landscaping equipment or natural gas usage. As such, the proposed project would not generate operational emissions. Therefore, in accordance with these standards, the proposed project would have a less than significant impact related to exposure of sensitive receptors to substantial pollutant concentrations.

Construction of the proposed project would result in short-term diesel exhaust emissions (DPM), which are TACs, from on-site heavy-duty equipment. Project construction would generate DPM

emissions from the use of off-road diesel equipment required for site grading and excavation, and other construction activities, as well as from the use of on-road heavy duty trucks. The dose to which sensitive receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the proposed project. Thus, the duration of the proposed construction activities (approximately 5 months) would only constitute approximately 0.6 percent of the total 70-year exposure period. In addition, while construction activities may at times occur near air quality-sensitive receptors (i.e., single family residences along Steuber Road), the majority of project construction activity would occur at a substantial distance from any one specific sensitive receptor location (i.e., more than 500 feet away) for most of the construction duration. The distribution of construction components would disperse pollutants generated by construction activity as construction moves from one location to another across the project components and their construction areas such that any one specific sensitive receptor location would not be exposed to prolonged periods of construction activity and would not be exposed to substantial pollutant concentrations.

The proposed project would comply with the CARB anti-idling Air Toxics Control Measure, which limits idling to no more than five minutes at any location for diesel-fueled commercial vehicles, would further minimize diesel particulate matter emissions in the construction area. Because the use of mobilized equipment would be temporary and because construction activity would move from one location to another within the project component construction areas such that any one specific sensitive receptor location would not be exposed to prolonged periods of construction activity, DPM from construction activities would not be anticipated to result in the exposure of sensitive receptors to levels that exceed applicable standards.

No new employees would be required for project operations to operate the pipeline and pump station and maintenance activities would be performed by current employees of the WWTP. Furthermore, operation of the pump station and pipeline does not generate area or energy emissions associated with hearths, consumer products, architectural coating, landscaping equipment or natural gas usage. As such, the proposed project would not generate operational emissions. Therefore, project operation would not be considered a substantial source of DPM. Therefore, the emissions would not pose a health risk to off-site receptors. Impacts would be less than significant.

d) **Construction and Operation**

Types of land uses that typically pose potential odor problems include agriculture, wastewater treatment plants, food processing and rendering facilities, chemical plants, composting facilities, landfills, waste transfer stations, and dairies. In addition, the occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source;

wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

The proposed project would construct a new pump station and a new pipeline to convey treated wastewater effluent. Occasionally, diesel exhaust from heavy equipment used during construction activities or during operational maintenance activities can generate objectionable odors, but these dissipate very quickly. Thus, neither construction nor the operation of the proposed project would create objectionable odors affecting a substantial number of people, and odor impacts would be less than significant.

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2.2.4 Biological Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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 Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

A biological resource reconnaissance survey was conducted on July 1, 2024 of the biological study area (BSA) for the proposed project. The BSA includes the existing Borrow Pit and proposed pump station, transmission pipeline, turnout, as well as a 500-foot buffer around the proposed facilities. The results of the desktop investigation and field reconnaissance were compiled into the *Biological Resources Technical Memorandum for the City of Tehachapi Reclaimed Water Application Project*, included as **Appendix BIO** to this IS/MND.

a) Construction and Operation

The 2024 field reconnaissance was conducted to gather baseline biological resources data during which time biologists characterized and mapped plant communities, disturbed/developed areas, and recorded observations/detections of plants and wildlife species, including special-status species.

Special-Status Plants

A review of the CNDDDB (CDFW 2024) and the CNPS Inventory of Rare and Endangered Plants (CNPS 2024) revealed a total of 12 special-status plant species with at least a low potential to occur within the BSA. These plants include San Joaquin adobe sunburst, Bakersfield cactus,

Aromatic canyon gooseberry, Tejon poppy, Tracy's eriastrum, Baja navarretia, Piute Mountains navarretia, Latimer's woodland-gilia, Kern buckwheat, alkali mariposa-lily, Palmer's mariposa-lily, and Aparejo grass. Based on the date of documentation of CNDDDB occurrences and current marginal habitat conditions and site use, these species are likely not present within the BSA. Impacts to special-status plants would be less than significant as a result of the proposed project, and no mitigation measures would be required.

Special-Status Wildlife

A review of the CNDDDB revealed 15 special-status wildlife species have at least a low potential to occur within the BSA. Based on the presence of suitable habitat within the BSA, there is moderate potential for eight special-status wildlife species to forage and/or breed within the BSA: Tricolored blackbird (*Agelaius tricolor*), California legless lizard (*Anniella* spp.), golden eagle (*Aquila chrysaetos*), Crotch bumble bee (*Bombus crotchii*), California condor (*Gymnogyps californianus*), loggerhead shrike (*Lanius ludovicianus*), Tehachapi pocket mouse (*Perognathus alticola* ssp. *inexpectatus*) (TPM) and coast horned lizard (*Phrynosoma blainvillii*). These species are discussed in detail below.

Crotch Bumble Bee

The Crotch bumble bee is a State Candidate Endangered species. Crotch bumble bee is a near-endemic to California with limited records in Baja California. It inhabits grassland and scrub habitats primarily located in the coast zone and central valley. The species nests in underground burrows and its preferred food source is nectar. This species is characterized by a short-tongue, and therefore, prefers certain plant species as a food source, including but not limited to, milkweeds (*Asclepias* sp.), dusty maidens (*Chaenactis* sp.), lupines (*Lupinus* sp.), sweet clovers (*Melilotus* sp.), phacelias (*Phacelia* sp.), sages (*Salvia* sp.), clarkias (*Clarkia* sp.), poppies (*Eschscholzia* sp.), and wild buckwheat (*Eriogonum* sp.). Many of these plant species have potential to occur within the BSA. Suitable open grassland and scrub habitat occurs for Crotch bumble bee within the wild oats and annual brome grasslands and rubber rabbitbrush scrub habitats within the Borrow Pit. These habitats may be impacted by vegetation removal activities associated with project construction. With the implementation of the proposed project, the removal of wild oats and annual brome grasslands and rubber rabbitbrush scrub habitats and ground disturbance from construction during the breeding season could result in potential permanent direct and temporary indirect impacts to the suitable breeding and foraging habitat for the Crotch bumble bee. Implementation of **Mitigation Measure BIO-1**, which would require focused surveys Crotch bumble bee at the Borrow pit and avoidance measures if the species are found, would reduce this impact to a less than significant level.

Tehachapi Pocket Mouse

The TPM is a State Species of Special Concern. It can be found in sandy soils in a variety of vegetation communities including annual grasslands and rubber rabbitbrush scrub at elevations between 3,500-6,000 feet TPM has been documented in nearby fallow fields dominated by Russian thistle (*Salsola tragus*). Rubber rabbitbrush occurs in portions of the BSA within the Borrow Pit and may be impacted by ground disturbing activities associated with project construction. Permanent habitat modification of rubber rabbitbrush scrub at the proposed pump station location would result in habitat loss or conversion, and could result in direct mortality of

TPM or disrupt breeding of the species during construction. With the implementation of the proposed project, the removal of rubber rabbitbrush scrub could result in potential permanent, direct impacts to TPM individuals and suitable habitat for TPM, which would be a potentially significant impact. Implementation of **Mitigation Measure BIO-2** would be required, which would involve conducting a trapping survey and avoidance measures for the TPM. With implementation of this mitigation measure, impacts would be reduced to a less than significant level.

Tricolored Blackbird

Tricolored blackbird is a State Threatened species. Suitable breeding and foraging habitat for the tricolored blackbird is present within the red willow and Fremont cottonwood forested portions of the riparian habitat present within the BSA at the Borrow Pit. This species may also utilize the agricultural fields for nesting and foraging as well, such as those dominated by herbaceous vegetation. Additionally, if proposed project construction takes place during the nesting season, disturbance from construction activities could result in potential indirect impacts to tricolored blackbird nesting activity. With the implementation of the proposed project, the removal of riparian and agricultural vegetation, as well as the indirect disturbance (e.g., noise, human activity) from construction during the breeding season, could result in potential permanent direct and temporary indirect impacts to the suitable breeding and foraging habitat for the tricolored blackbird. Implementation of **Mitigation Measure BIO-3** and **Mitigation Measure BIO-5**, which would require focused surveys during the nesting season for tricolored blackbird and avoidance measures if active nests are found, would reduce this impact to a less than significant level.

California Condor and Golden Eagle

California condor is a Federal and State Endangered species, and golden eagle is a State Fully Protected species. Although California condor and golden eagle have a moderate potential to forage within the BSA, these species are not expected to nest within the BSA due to lack of cliff-walled canyons that contain their preferred nesting habitat. Golden eagles can sometimes nest in large trees in open areas; however, the trees within the BSA are limited to riparian trees within the Borrow Pit and are likely not suitable habitat for golden eagle nesting. Thus, with implementation of the proposed project, which would impact limited areas of potential foraging habitat, and in light of the extensive foraging habitat of native shrublands surrounding the BSA and throughout the region that would remain available, impacts to California condor and golden eagle foraging habitat are less than significant, and no mitigation is required.

California Legless Lizard, Coast Horned Lizard, and Loggerhead Shrike

California legless lizard, coast horned lizard, and loggerhead shrike are State Species of Special Concern. Suitable grassland and scrub habitat is present throughout the BSA for California legless lizard, coast horned lizard, and loggerhead shrike. During construction, it is expected that if loggerhead shrike is in the vicinity of the work area, this species, if present, would move out of the way of vehicles and construction equipment. Direct impacts to these species would be less than significant as there is ample native shrubland within the area and vicinity to provide habitat for these species. Although California legless lizard and coast horned lizard would also be expected to move out of the way, there is greater potential for direct impacts to these species to

occur. Additionally, if any loggerhead shrikes are nesting within the proposed project areas, impacts to this species may occur. Thus, impacts to these special-status wildlife species are potentially significant. Implementation of **Mitigation Measures BIO-4** and **Mitigation Measure BIO-5**, which would require pre-construction surveys and nesting bird surveys and appropriate avoidance measures if species are found, would reduce potentially significant impacts to California legless lizard, coast horned lizard, and loggerhead shrike to a less than significant level.

Mitigation Measure

BIO-1: Impacts to Crotch Bumble Bee. Project activities could negatively impact Crotch bumble bee foraging and/or nesting through the direct removal of habitat and/or disruption of breeding/nesting activities at the Borrow Pit. A qualified entomologist familiar with the species' behavior and life history shall conduct surveys to determine presence/absence of the Crotch bumble bee within the year prior to vegetation removal and/or grading in areas that provide suitable habitat (i.e., rubber rabbitbrush scrub and grassland communities) for this species. A minimum of three surveys, ideally 2-4 weeks apart, should also be conducted during peak flying season when the species is most likely to be detected above ground, between March 1 to September 1 and during peak bloom of nectaring resources (CDFW 2024). At minimum, a survey report should provide the following:

- A description and map of the survey area, focusing on areas that could provide suitable habitat for Crotch bumble bee.
- Field survey conditions that should include name(s) of qualified entomologist(s) and brief qualifications; date and time of survey; survey duration; general weather conditions; survey goals, and species searched.
- Map(s) showing the location of nests/colonies.
- A description of physical (e.g., soil, moisture, slope) and biological (e.g., plant composition) conditions at each nest/colony location and/or where suitable habitat is present.

If Crotch bumble bee is detected, the qualified entomologist should identify the location of all nests within and adjacent to the project site. A 15-meter (50-foot) no disturbance buffer zone should be established around any identified nest(s) to reduce the risk of disturbance or accidental take. A qualified entomologist should expand the buffer zone as necessary to prevent disturbance or take.

If Crotch bumble bee is detected and impacts to Crotch bumble bee cannot be feasibly avoided, consultation with the CDFW shall be initiated to obtain take authorization (pursuant to FGC, § 2080 et seq).

Any floral resource associated with Crotch bumble bee that will be removed or damaged by the project should be replaced at no less than 1:1, as determined in consultation with CDFW.

BIO-2: Impacts to Tehachapi Pocket Mouse and Occupied Habitat. Prior to commencement of project activities at the proposed 12-inch pipeline area, a qualified biologist shall conduct a live-trapping survey for the Tehachapi pocket mouse, within and immediately adjacent to project impact areas, in accordance with CDFW standard live-trapping protocols.

If Tehachapi pocket mouse are detected during the live-trapping, impacts to occupied habitat should be avoided wherever possible. If construction activities cannot avoid occupied habitat, a

qualified biologist shall delineate the portion of the work area adjacent to the occupied habitat with exclusionary fencing and trap and relocate any individuals out of the work area within three days prior to the commencement of work activities. CDFW shall be consulted on the relocation methods prior to relocation efforts, as well as any additional avoidance and minimization measures to protect individuals.

BIO-3: Impacts to Tricolored Blackbird. Prior to implementation of the proposed project, a qualified biologist shall conduct focused surveys during the nesting season for tricolored blackbird at the Borrow Pit to determine if this species uses the BSA for nesting. If tricolored blackbirds are not detected, no further action is necessary.

If tricolored blackbirds are observed nesting within or adjacent to the borrow pit, construction activities within 300 feet of suitable nesting habitat shall be avoided to the extent feasible and Mitigation Measure BIO-5 shall be implemented to prevent impacts to nesting blackbirds. If occupied nesting habitat for tri-colored blackbird is unavoidable, suitable nesting habitat shall be replaced at minimum ratio of 2:1 at a suitable location approved by CDFW. The replacement habitat shall be suitable to support tricolored blackbird breeding habitat with similar nesting and foraging habitat functions as is provided by the existing habitat.

BIO-4: Pre-Construction Wildlife Clearance Surveys. Prior to any ground disturbance, a qualified biologist shall conduct a pre-construction wildlife clearance survey throughout the project sites, including an approximate 100-foot buffer for California legless lizard and coast horned lizard. If California legless lizard or coast horned lizard are observed within 100 feet of the project work areas during pre-construction clearance surveys, a qualified biologist shall relocate the individuals to suitable habitat located a sufficient distance away from the impact areas to ensure that construction-related impacts are avoided.

BIO-5: Impacts to Nesting Avian Species and Active Nests. If the nesting avian season cannot be avoided and construction or vegetation removal is initiated between March 1 – September 15 (or January 1 to August 1 for raptors), the following measures would reduce potential impacts to nesting and migratory birds and raptors to less than significant levels:

- Within 10 days of site clearing, a qualified biologist shall conduct a preconstruction, migratory bird and raptor nesting survey throughout the BSA. The biologist must be qualified to determine the status and stage of nesting by migratory birds and all locally breeding raptor species without causing intrusive disturbance. The preconstruction survey shall include a 300-foot buffer for passerine species and 500-foot for raptors.
- If an active nest is confirmed by the biologist, no construction activities shall take place within 300 feet of the nesting site for migratory birds and 500 feet of the nesting site for raptors. The buffer zones around any nest within which project-related construction activities may be reduced as deemed acceptable by a qualified biologist. Construction activities may resume once the breeding season ends (March 1 – September 15), or the nest has either failed or the birds have fledged.

b) **Construction and Operation**

During the 2024 field reconnaissance, approximately 4.92 acres of red willow-Fremont cottonwood woodland and forest habitat was identified within the BSA surrounding the existing Borrow Pit. However, the direct impact to this sensitive natural community as a result of the current project is not expected. The proposed project would be required to comply with construction-related BMPs within a Stormwater Pollution Prevention Plan (SWPPP) by a

Qualified SWPPP Developer, which would include erosion control and prevention of fuel spills/leaks into the Borrow Pit. Impacts to CDFW sensitive communities would be considered less than significant and no mitigation would be required.

c) **Construction and Operation**

A formal aquatic resources delineation was not completed during the 2024 field reconnaissance; however, the open water and riparian vegetation within the Borrow Pit are potentially jurisdictional with the CDFW, Regional Water Quality Control Board and the United States Army Corps of Engineers. Direct removal of these resources is not expected during the proposed project activities. The proposed project would be required to comply with construction-related BMPs within a SWPPP by a Qualified SWPPP Developer, which would include erosion control and prevention of fuel spills/leaks into the Borrow Pit. Impacts to state or federally protected wetlands would be considered less than significant.

d) **Construction and Operation**

Although the BSA lies within the Pacific Flyway and is adjacent to Tehachapi Connection, which is an important wildlife corridor linking the southern Coast and Transverse Ranges in the southwest to the Sierra Nevada Mountain Range in the north, construction of the proposed project is not anticipated to significantly restrict the movement of wildlife because the BSA would still remain accessible and traversable to any wildlife that may be foraging or moving through the area during construction and operational activities. These areas will remain intact and will continue to provide water sources and habitat for wildlife movement during and following completion of the proposed construction activities within the BSA. Additionally, the majority of the 12-inch proposed transmission pipeline corridor is currently heavily disturbed (i.e. due to vehicle travel), and species are most likely used to the level of disturbance at these locations and aware of the travel routes needed to access other adjacent open areas and corridors. Although construction activities will introduce a temporary disruption to adjacent habitats from the presence of large equipment and people in the area within limited, discrete areas of the BSA, work activities will be limited to daylight hours and will not disrupt migration and local movement through the area that generally occurs during nighttime hours. Therefore, construction activities and operations are not anticipated to disrupt wildlife movement.

Nesting birds and raptors have the potential to be present in the project sites and could be affected by the proposed project. Raptors, and migratory and common bird species may utilize all habitats within the project sites, including but not limited to, trees, vegetation, and building structures for foraging and breeding purposes. These species could be adversely affected by habitat modification and noise-related disturbances during construction that could disrupt breeding behavior and nesting activity. Thus, impacts to nesting birds from implementation of the proposed project are potentially significant. With implementation of **Mitigation Measure BIO-5**, impacts will be reduced to less than significant.

Mitigation Measure

Implement **Mitigation Measure BIO-5**.

e) **Construction and Operation**

The proposed project is within the jurisdiction of the City of Tehachapi General Plan and Kern County General Plan, both of which are discussed below.

Tehachapi General Plan

Per Policy NR26, which requires identification of significant resources through project design, Policy NR28, which requires protection and/or restoration of identified resources and areas, and Policy NR30 which requires enhancement of the existing tree resources through regulations that set forth thresholds for identifying and protecting a significant tree resource, the analysis provided in Sections a) through d) above identify important biological resources (e.g., special-status species, sensitive natural communities [including tree resources], aquatic resources, and wildlife movement), and prescribe mitigation for potentially significant impacts to those resources that may result from the proposed project. Thus, with implementation of **Mitigation Measure BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5**, the proposed project would not conflict with the policies of the Tehachapi General Plan.

Kern County General Plan

Per Policy 27, threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws. As detailed in Section a) above, special-status species were analyzed in accordance with federal and state regulations, and where necessary, mitigation measures were prescribed for the protection of special-status species. Per Policy 32, riparian areas will be managed in accordance with the USACE and the CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns. As detailed in Section c) above, aquatic resources potentially subject to the regulatory authority of the CDFW and RWQCB were identified in accordance state regulations, and a mitigation measure was prescribed to conduct an aquatic resources delineation and provide mitigation for impacts that cannot be avoided or minimized. Thus, with implementation of **Mitigation Measure BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5**, the proposed project would not conflict with the policies of the Kern County General Plan.

Mitigation Measure:

Implement **Mitigation Measure BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5**.

f) **Construction and Operation**

No habitat conservation plans or natural community conservation plans are applicable to the BSA. As a result, no conflicts with the provisions of an adopted HCP would occur as a result of the proposed project.

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ESA. 2024. Biological Resources Memorandum for the City of Tehachapi Reclaimed Water Application Project. Prepared July 2024.

2.2.5 Cultural Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
V. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

a) Construction and Operation

A Cultural Resources Assessment was conducted for portions of the project in July 2021 (ESA 2021). The assessment included a California Historical Resources Information System – Southern San Joaquin Valley Information Center (SSJVIC) records search conducted on February 22, 2021, Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search conducted on February 8, 2021, a pedestrian survey conducted on March 22, 2021, evaluation of a previously recorded historic-era resource, and a subsurface archaeological sensitivity assessment based on a review of historic maps, aerial photographs, and geologic maps. In 2024, Native American outreach was conducted according to AB 52 as discussed in Section 2.2.18.

The SSJVIC records search results indicate that approximately 50 percent of the 0.50-mile records search radius and approximately 20 percent of the project site has been included in previous cultural resources assessments. The SSJVIC records search results also indicate that a total of 12 cultural resources have been recorded within the 0.50-mile radius, including eight historic built environment resources and four archaeological resources (two historic-period, one prehistoric, and one multicomponent). One resource (P-15-003541) is located within the project site.

The NAHC SLF search returned negative results within the project site. No new cultural resources were encountered within the project site during the pedestrian survey. Generally flat areas with visible ground surface, including unimproved roadway shoulders, were subject to systematic pedestrian survey with transects spaced between 5-15 meters apart (approximately 15-50 feet). Areas with limited ground visibility, such as densely vegetated or inundated areas, were subject to opportunistic survey wherein areas with some ground visibility were targeted. Paved areas, such as existing roads and parking lots, were not surveyed. Ground surface visibility in the areas surveyed ranged from approximately 0 to 100 percent.

Resource P-15-003541 (Steuber Road) is an approximate 2-mile long improved and unimproved road extending from Tehachapi Boulevard to Blackburn Dam. The road appears on a 1914 historic topographic map and is still currently in use. Resource P-15-003541 (Steuber Road) was evaluated and recommended ineligible for listing in the National Register of Historic Places and California

Register of Historical Resources under criteria A/1 through D/4. As such, it is not a historical resource as defined in §15064.5.

The subsurface archaeological sensitivity assessment concluded that there is a low potential for encountering subsurface archaeological resources within the project site. The low potential is based on a combination of the following factors: (1) the portions of the project site underlain by Pleistocene/Pliocene-age soils would not contain buried archaeological materials since the sediments predate human occupation of North America; (2) the portions of the project site underlain by Holocene-age soils, which are contemporaneous with the period for which there is widely accepted evidence for human occupation of Southern California, have been subject to previous disturbances that would have destroyed archaeological resources if any once existed; (3) historical water sources capable of sustaining continuous human occupation are located too far from the project site; (4) there is a lack of prehistoric resources within or in close proximity to the project site.

The SSJVIC records search, NAHC SLF search, and pedestrian survey yielded negative results. The archaeological sensitivity assessment concluded that there is a low potential for encountering subsurface archaeological resources within the project. However, since the proposed project includes ground disturbance, there remains the possibility that unknown archaeological resources potentially qualifying as historical resources as defined in §15064.5 could be encountered. The implementation of **Mitigation Measures CUL-1 and CUL-2**, which would require construction worker cultural resources sensitivity training, procedures to follow in the event of the discovery of archaeological resources, and treatment of discoveries, would reduce impacts to a less than significant level. Once built and operational, there would be no project-related activities that could impact historical resources. Therefore, no impact would occur.

b) **Construction and Operation**

As noted under impact a), the SSJVIC records search, NAHC SLF search, and pedestrian survey did not identify archaeological resources within the project site. Additionally, the subsurface archaeological sensitivity assessment indicated that the project site appears to contain a low potential for yielding buried prehistoric archaeological resources. However, since the proposed project includes ground disturbance, there remains the possibility that unknown archaeological as defined in §15064.5 could be encountered. The implementation of **Mitigation Measures CUL-1 and CUL-2**, which would require construction worker cultural resources sensitivity training, procedures to follow in the event of the discovery of archaeological resources, and treatment of discoveries, would reduce impacts to a less than significant level. Once built and operational, there would be no project-related activities that could impact archaeological resources. Therefore, impacts would be less than significant.

c) **Construction and Operation**

The SSJVIC records search, NAHC SLF search, and pedestrian survey did not identify human remains within the project site. Should ground disturbance encounter human remains, disturbance of those remains could result in a significant effect on the environment. With implementation of **Mitigation Measure CUL-3**, which requires following state laws in the event of a discovery, impacts to human remains would be less than significant. Once built and operational, there would be no

project-related activities that could result in disturbance of human remains. Therefore, impacts would be less than significant.

Mitigation Measures

Mitigation Measure CUL-1: Prior to start of ground-disturbing activities, the Qualified Archaeologist or their designee shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered and the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. The City shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance

Mitigation Measure CUL-2: In the event of the unanticipated discovery of archaeological materials, the City shall immediately cease all work activities in the area (within approximately 100 feet) of the discovery until it can be evaluated by the Qualified Archaeologist. Construction shall not resume until the Qualified Archaeologist has conferred with the City on the significance of the resource. If it is determined that the discovered archaeological resource constitutes a historical resource or unique archaeological resource pursuant to CEQA, avoidance and preservation in place shall be the preferred manner of mitigation. Preservation in place maintains the important relationship between artifacts and their archaeological context and also serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is determined to be infeasible and data recovery through excavation is the only feasible mitigation available, an Archaeological Resources Data Recovery and Treatment Plan shall be prepared and implemented by the Qualified Archaeologist that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource. The City shall consult with appropriate Native American tribal representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resources, beyond those that are scientifically important, are considered. The plan shall include provisions for the final disposition of the recovered resources, which may include onsite reburial, curation at a public, non-profit institution, or donation to a local Native American Tribe, school, or historical society.

Mitigation Measure CUL-3: If human remains are encountered, the City or its contractor shall halt work in the vicinity (within 100 feet) of the discovery and contact the Kern County Coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5, which requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the NAHC. The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the landowner, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods.

References

ESA. 2021. *Cultural Resources Assessment for the Tehachapi Groundwater Sustainability Project*. Confidential. November 2021.

2.2.6 Energy

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
VI. ENERGY — Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) The proposed project would consume energy during construction activities primarily from on- and off-road vehicle fuel consumption in the form of diesel, gasoline, and electricity from water conveyance for dust control. Project operations would consume energy from the proposed project pump station. The analysis below includes the proposed project's energy requirements and energy use efficiencies by energy type for each stage of the project (construction and operation).

Construction

Construction of the project would result in energy demand primarily from off-road equipment and on-road vehicle fuel consumption (diesel and gasoline) and secondarily from electricity for conveying water used for dust suppression. The analysis below includes the proposed project's energy requirements and energy use efficiencies by energy type for each stage of the project.

The estimated fuel usage for off-road equipment is based on the number and type of equipment that would be used during construction activities, hour usage estimates, the total duration of construction activities, and hourly equipment fuel consumption factors from the CARB OFFROAD model, which was used in the project's air quality analysis. On-road vehicles would include trucks to haul material to and from the project site, vendor trucks to deliver supplies necessary for project construction, water trucks for dust control, and fuel used for employee commute trips. The estimated fuel usage for on-road vehicles is based on the number of trucks and employee commute trips that would occur during construction activities and per mile fuel consumption factors from the CARB EMFAC model, which was used in the project's air quality analysis. Electricity from water conveyance for dust control was calculated using assumptions for gallons used per acre per day and CalEEMod water conveyance intensity factors applied to calculate total construction electricity consumption. Construction activities typically do not involve the consumption of natural gas. **Table 2-4** summarizes the proposed project's total and annual fuel and electricity consumption from construction activities.

TABLE 2-4
SUMMARY OF ENERGY CONSUMPTION DURING PROJECT CONSTRUCTION

Fuel Type	Quantity
Gasoline	gallons
On-Road Construction Equipment	2,416
Off-Road Construction Equipment	-
Total Gasoline	2,416
Diesel	gallons
On-Road Construction Equipment	2,064
Off-Road Construction Equipment	31,639
Total Diesel	33,703
Electricity	MWh
Water Conveyance for Dust Control	0.35
Total Electricity	0.35

SOURCE: ESA 2024

NOTES:

gal = gallons

MWh = megawatt-hours

As shown in Table 2-4, annual average construction electricity usage would be approximately 0.35 megawatt-hours (MWh) and would be within the supply and infrastructure capabilities of Southern California Edison (SCE), the electricity provider for the project site, which had a total system sales of 79,256 gigawatt-hours (GWh) in 2023 (SCE 2023).⁶ The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed, and would cease upon completion of construction. Electricity use from construction would be short-term, limited to working hours, used for necessary construction-related activities, and represent a small fraction of the project's net annual operational electricity (the project's annualized construction electricity would be approximately 1 percent of the project's annual operational electricity). When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. Therefore, impacts from construction electrical demand would be less than significant and would not result in the wasteful, inefficient, and unnecessary consumption of energy.

The energy use summary provided above in Table 2-4 represents the amount of energy that could potentially be consumed during project construction based on a conservative set of assumptions, provided in **Appendix ENERGY** of this Draft IS/MND. As shown, on- and off-road vehicles would consume an estimated annual average of 2,416 gallons of gasoline and approximately 33,703 gallons of diesel fuel throughout the project's construction. For comparison purposes, the fuel usage during project construction would represent approximately 0.001 percent of the 2022 annual on-road gasoline-related energy consumption and 0.02 percent of the 2022 annual diesel

⁶ The most recent year that SCE data was available.

fuel-related energy consumption in Kern County. Detailed calculations are shown in Appendix ENERGY of this Draft IS/MND.

Operation

During operation of the proposed project, energy would be consumed for the proposed project's pump station. **Table 2-5** summarizes the proposed project's operational energy consumption.

TABLE 2-5
PROJECT OPERATIONAL ENERGY USAGE

Energy Type	Annual Quantity ^{a,b}
Electricity	
Pump Station	530 MWh
Total Electricity	530 MWh

SOURCE: ESA 2024

NOTES:

MWh = megawatt-hours

a. Detailed calculations are provided in Appendix ENERGY of this IS/MND

b. Totals may not add up due to rounding of decimals.

The proposed project would increase demand for electricity during operations. As shown in Table 2-5, the proposed project would result in an annual consumption of electricity of approximately 530 MWh per year, which would represent less than 0.0007 percent of SCE's total sales of 79,256 GWh in 2023 (SCE 2023). Therefore, operation of the project would not result in the wasteful, inefficient, and unnecessary consumption of electricity, and impacts would be less than significant.

As described above, no new employees would be required for project operations to operate the pipeline and pump station and maintenance activities would be performed by current employees of the WWTP. Therefore, the proposed project would not increase demand for transportation fuels relative to existing site conditions for gasoline and diesel consumed for employee trips to and from the project site, as current employees of the WWTP would periodically visit the pump station at the Borrow Pit for maintenance activities. In addition, no emergency generators nor natural gas fueled sources are included in the proposed project. Therefore, operation of the project would not result in the wasteful, inefficient, and unnecessary consumption of transportation fuels, and impacts would be less than significant.

b) Construction

The City as lead agency for the project would utilize construction contractors who would demonstrate compliance with applicable regulations. Construction equipment would comply with federal, State, and regional requirements where applicable. With respect to truck fleet operators, the USEPA and National Highway Traffic Safety Administration (NHTSA) have adopted fuel efficiency standards for medium- and heavy-duty trucks. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23

percent over the 2010 baseline, depending on the vehicle type.⁷ USEPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.⁸ The energy modeling for trucks does not take into account specific fuel reductions from these regulations, since they would apply to fleets as they incorporate newer trucks meeting the regulatory standards; however, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time as older trucks are replaced with newer models that meet the standards.

In addition, construction equipment and trucks are required to comply with CARB ATCMs regarding heavy-duty truck idling limits of five minutes at a location and the phase-in of off-road emission standards that result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines (CARB 2004). Although these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction-related energy.

Operation

With respect to operational transportation-related fuel usage, no new employees would be required for project operations to operate the pipeline and pump station and maintenance activities would be performed by current employees of the WWTP. Therefore, the proposed project would not increase demand for transportation fuels relative to existing site conditions for gasoline and diesel consumed for employee trips to and from the project site, as regular employees of the WWTP would periodically visit the pump station at the Borrow Pit for maintenance activities. Furthermore, the existing regular employees would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles. The project would comply with CAFE fuel economy standards and the Pavley Standards, which are designed to result in more efficient use of transportation fuels. Thus, since the proposed project would comply with state and local regulations to reduce energy consumption, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be less than significant.

References

California Air Resources Board (CARB). 2004. *Proposed Regulation Order: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling, Appendix A*. <https://www.arb.ca.gov/regact/idling/isorappf.pdf> Accessed July 2024.

California Energy Commission, *California Annual Retail Fuel Outlet Report Results (CEC-A15) Spreadsheets*, 2023. Available at: <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting>. Accessed July 2024.

⁷ USEPA, Fact Sheet: EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles, August 2011.

⁸ USEPA, Federal Register/Vol. 81, No. 206/Tuesday, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, October 25, 2016.

Southern California Edison (SCE), *2023 Annual Report*. <https://www.edison.com/investors/financial-reports-information/annual-reports>. Accessed July 2024.

2.2.7 Geology and Soils

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

a.i) Construction and Operation

No known active faults cross the City of Tehachapi (City of Tehachapi 2012). The active Garlock Fault is located approximately 5 miles southeast of the project site. The active White Wolf Fault is located approximately 12 miles northwest of the project site and had an earthquake rated at 7.5 on the Mercalli scale in 1952. The Tehachapi Creek Fault is within the City of Tehachapi but is considered inactive. The project site is not located in an Alquist-Priolo Earthquake Fault Zone as established by the Alquist-Priolo Fault Zoning Map, and no known active faults cross the project site or its immediate vicinity. The construction and operation of the proposed project would not cause potential substantial adverse effects associated with rupture of a known earthquake fault. Therefore, there would be no impact.

a.ii) Construction and Operation

The active White Wolf Fault and the Garlock Fault may have earthquakes that could subject the project area to strong seismic ground-shaking (City of Tehachapi 2012). Construction of the

proposed structures would comply with the most recent seismic standards as set forth in the California Building Code and local building codes. Compliance with these standards would ensure potential impacts related to strong seismic ground shaking would be less than significant. Once built and operational, there would be no project-related activities that would contribute to potential hazards related to strong seismic ground shaking. Therefore, impacts would be less than significant.

a.iii, iv) **Construction and Operation**

Potential hazards related to major earthquakes include seismic-induced ground failures, such as liquefaction and lateral spreading, and landslides. The project site components are not located in areas susceptible to liquefaction and lateral spreading (City of Tehachapi 2012). The project components are located in relatively flat areas that would not be subject to landslides. In addition, construction of the proposed structures would comply with the most recent seismic standards as set forth in the California Building Code and local building codes. Compliance with these standards would ensure potential impacts related to seismic-induced ground failures would be less than significant. Once built and operational, there would be no project-related activities that would contribute to potential hazards related to seismic-induced ground failures, such as liquefaction and lateral spreading, and landslides. Therefore, impacts would be less than significant.

b) **Construction**

Earthmoving activities associated with the proposed project would include excavation, trenching, grading, and construction over an area that would be more than one acre. These activities could expose soils to erosion processes; the extent of erosion, if any, would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. Projects that disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one acre or more, are required to obtain coverage under the *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ) (Construction General Permit). Construction activity subject to this permit includes clearing, grading, excavation, and stockpiling of excavated soil. The Construction General Permit requires the development of a SWPPP by a Qualified SWPPP Developer. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment and fuel storage; protocols for responding immediately to spills; and describe best management practices (BMPs) to control run-on and runoff from the construction site. Since the project site has relatively flat terrain with a low potential for soil erosion and would comply with the State Water Resources Control Board (SWRCB) requirements, the project's impacts relative to erosion would be less than significant.

Operation

The proposed transmission pipeline would be subsurface and would not be subject to or cause erosion. Treated water from the WWTP would be conveyed and contained within the existing Borrow Pit. Impacts relative to erosion during operations would be less than significant.

c) **Construction and Operation**

As discussed above in *Geology and Soils* Impact (a.iii) and (a.iv), impacts relative to liquefaction, lateral spreading, and landslides would be less than significant. Subsidence and collapse are typically caused by the injection or extraction of water, or inadequate compaction of backfill. The proposed changes at the pump station would not cause conditions susceptible to subsidence or collapse because water would not be injected or extracted at these locations. The transmission pipeline would be buried at a relatively shallow depth beneath Steuber Road. The backfill placed in the trench would require compaction to achieve public road construction standards. The compaction of the backfill would reduce the potential for subsidence or collapse. In summary, impacts relative to liquefaction, lateral spreading, landslides, subsidence, and collapse during construction and operation would be less than significant.

d) **Construction and Operation**

Expansive soils are typically soils with a high content of plastic clay and silt. Plastic clays and silts are susceptible to shrinking and swelling when subjected to drying and wetting cycles. The volume change can damage structures. Soil maps for the area of the proposed pump station and transmission pipeline indicate the underlying soils have a low susceptibility to expansion (NCRS 2024). Soil under structures would be required to be treated for expansive potential. If present, the expansive soils would be removed or treated to prevent damage to structures from expansive soils. With compliance with the CBC and local building codes, impacts relative to expansive soils during construction and operation would be less than significant.

e) **Construction and Operation**

The proposed project does not include septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. The water conveyed to the Borrow Pit would be secondary treated effluent. Prior to discharging the water to the Borrow Pit, the water would be treated to standards promulgated in Title 22, California Code of Regulations (CCR), Division 4, Chapter 3, *Water Recycling Criteria*. With compliance with Title 22 regulations, the water would no longer be considered wastewater and would be considered recycled water. Impacts relative to wastewater disposal during construction and operation would be less than significant.

f) **Construction and Operation**

A Paleontological Resources Assessment was conducted for the project site in April 2021 (ESA 2021). The assessment included geologic map review, literature review, a paleontological resources database search by the Natural History Museum of Los Angeles County (LACM), a database search of the online records through the University of California Museum of Paleontology (UCMP), and a search of the FAUNMAP/NEOTOMA online databases.

No paleontological resources were identified within the project area as a result of the database searches. The LACM indicates that one single fossil locality of Pleistocene age and from an unknown formation (LACM VP 3722, which yielded a fossil specimen of a horse) found within the Tehachapi area; however specific locality data is not available. In addition, there are several fossil localities (LACM VP 3722, 5853-5854, 5931, 6263-6267, 7853, 7884, and 7891) situated in the general vicinity (approximately 15 to 60 miles away from the project area) from the same

sedimentary deposits (Holocene and Pleistocene-aged soils of unknown or undetermined formations) that occur in the project area.

The geologic map review indicates that the project area has exposures of the following fossiliferous geological formation/units: Fanglomerate of the Tehachapi Formation (Qtf) and Younger Quaternary Alluvium (Qa). In addition, south of the proposed project there is an apron of older alluvium (Qoa) at the base on the mountains, which likely extends below the Qa in the project area. The Fanglomerate (Qtf) are coarse alluvial fans (of Pleistocene or perhaps Pliocene age), which are old enough to contain significant fossils. However, coarse alluvial facies (i.e. rock characterizations) are often not conducive to preserving fossils and the lack of a known fossil record from the Tehachapi Formation suggests low potential. The Quaternary alluvium (Qa) is assigned a low-to-high paleontological potential increasing with depth. The exact depth at which the transition from low to high potential occurs is unknown in the proposed project area, but is estimated to be 5 feet based on similar geological settings. The older alluvium (Qoa) has a high paleontological potential. Similarly, while the depth at which the older alluvium (Qoa) may be encountered is unknown, is also estimated to be 5 feet based on similar geological settings.

The City of Tehachapi General Plan indicates that the greater Tehachapi Valley has documented paleontological sites with evidence of prehistoric flora and fauna embedded in rock formations (City of Tehachapi 2012). As a result, the General Plan includes policies to ensure paleontological resources are preserved and protected if they are discovered. The following City of Tehachapi General Plan policies related to paleontological resources are applicable to the proposed project:

- Policy NR42: Maintain a step in the development process for evaluating the potential for archaeological and paleontological resources.
- Policy NR43: Maintain that excavation, exploration and documentation of archaeological and paleontological sites be conducted only by recognized authorities by applicable State laws.
- Policy NR44: Maintain that in the event of discovering an archaeological or paleontological site, that the appropriate authorities and parties be notified according to established procedures and applicable State laws.

Should paleontological resources be encountered, the project could directly or indirectly destroy a unique paleontological resource or site. No unique geologic features are known to be present in the project area. With implementation of **Mitigation Measures GEO-1 and GEO-2**, which require retention of a qualified paleontologist, construction worker paleontological resources sensitivity training, and procedures to follow in the event of the discovery of paleontological resources, impacts would be reduced to a less than significant level. Once built and operational, there would be no project-related activities that would impact paleontological resources. Therefore, impacts would be less than significant.

Mitigation Measures

Mitigation Measure GEO-1: The City shall retain a paleontologist who meets the Society of Vertebrate Paleontology's (SVP, 2010) definition for Qualified Professional Paleontologist (Qualified Paleontologist). Prior to the start of ground-disturbing activities, the Qualified Paleontologist or their designee shall conduct paleontological resources sensitivity training for all

construction personnel. The training shall include how to identify the types of paleontological resources that may be encountered and the proper procedures to be enacted in the event of an inadvertent discovery of paleontological resources.

Mitigation Measure GEO-2: If a potential fossil is found, the City or its contractor shall temporarily halt excavation activities in the area of the exposed fossil and contact the Qualified Paleontologist to evaluate the discovery. The City or its contractor shall establish a 50-foot buffer area around the find where construction activities shall not be allowed to continue until the evaluation has been completed. Work shall be allowed to continue outside of the buffer area. At the Qualified Paleontologist's request, and to reduce any construction delay, the contractor shall assist in removing rock/sediment samples for initial processing and evaluation, if needed. If a fossil is determined to be significant, the Qualified Paleontologist shall implement a paleontological salvage program to remove the resources from their location, following the guidelines of the SVP (2010). Any fossils encountered and recovered shall be prepared to the point of identification, catalogued, curated at an accredited repository, and documented in a report.

References

City of Tehachapi. 2012. *Tehachapi General Plan*.

<https://www.liveuptehachapi.com/DocumentCenter/View/3184/Combined-General-Plan-2015-reduced?bidId=>

ESA. 2021. *Paleontological Resources Assessment for the Tehachapi Groundwater Sustainability Project*; City of Tehachapi and Unincorporated Kern County, California. Prepared by Russell Shapiro and Candace Ehringer.

Natural Resources Conservation Service (NCRS). 2024, *Web Soil Survey, Soil Map*.

<https://websoilsurvey.nrcs.usda.gov/app/>, accessed June 26, 2024.

Society of Vertebrate Paleontology (SVP). 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*.

2.2.8 Greenhouse Gas Emissions

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a,b) The California Global Warming Solutions Act of 2006 (AB 32) established a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. CARB is the agency responsible for implementing AB 32 through development of Climate Change Scoping Plans. The first Scoping Plan was approved by CARB in 2008 and the second was approved in 2014. Subsequently, Senate Bill 32 (SB 32) was adopted to codify the 2030 GHG emissions reduction target of 40 percent below 1990 levels by 2030. In response to SB 32 and the required 2030 GHG reduction target, CARB adopted the 2017 update to the Climate Change Scoping Plan (CARB 2017). CARB published the Final 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) in November 2022, as the third update to the initial 2008 Climate Change Scoping and update to the 2017 Climate Change Scoping Plan. The 2022 Scoping Plan is the most comprehensive and far-reaching Scoping Plan developed to date (2022 CARB). It identifies a technologically feasible, cost-effective, and equity-focused path to achieve new targets for carbon neutrality by 2045 and to reduce anthropogenic GHG emissions to at least 85 percent below 1990 levels, while also assessing the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32. The 2030 target is an interim but important stepping stone along the critical path to the broader goal of deep decarbonization by 2045. The 2022 Scoping Plan reflects existing and recent direction in the Governor's Executive Orders and State Statutes, which identify policies, strategies, and regulations in support of and implementation of the Scoping Plan. Among these include Executive Order B-55-18 and AB 1279 (The California Climate Crisis Act), which identify the 2045 carbon neutrality and GHG reduction targets required for the Scoping Plan.
- The proposed project is located within the jurisdiction of the City of Tehachapi, as well as unincorporated Kern County and is in the portion of the Air Basin under the jurisdiction of EKAPCD. The City of Tehachapi has not adopted thresholds of significance apart from EKAPCD's thresholds. In accordance with EKAPCD guidance document, *Addendum to CEQA Guidelines Addressing GHG Emission Impacts For Stationary Source Projects When Serving As Lead CEQA Agency* (EKAPCD 2012), a new stationary source project would be considered to have a less than significant impact on GHG emissions if it meets one of the following conditions:
1. Project-specific GHG emissions are less than 25,000 metric tpy or,
 2. Project demonstrates to EKAPCD that it is in compliance with state GHG reduction plan such as AB 32 or future federal GHG reduction plan if it is more stringent than state plan,

3. Project GHG emissions will be mitigated to a less than significant impact if GHGs can be reduced by at least 20% below Business-As-Usual (BAU) through implementation of one or more of the following strategies:
 - a) Compliance with a Best Performance Standard (BPS) as set forth in Section VI of this Policy⁹,
 - b) Compliance with GHG Offset as detailed in Section VI of this Policy,
 - c) Compliance with an Alternative GHG Reduction Strategy as discussed in Section VII of this Policy.

GHG emissions are cumulative in nature and there are no non-cumulative GHG emission impacts from a climate change perspective. The proposed project would generate GHG emissions that have the potential to contribute to climate change impacts by its incremental contribution of GHGs. When combined with the cumulative increase of all other sources of GHGs, the proposed project's incremental contributions have the potential to constitute potential influences on global climate change.

The reference gas for global warming potential is carbon dioxide (CO₂). To describe how much global warming a given type of GHG may cause, the carbon dioxide equivalent (CO₂e) is used and quantified in metric tons (MTCO₂e). A carbon dioxide equivalent is the mass emissions of an individual GHG, multiplied by its global warming potential.

Determinations in this analysis of project construction impacts on GHGs relies on modeling performed using CalEEMod, Version 2022.1. CalEEMod is the recommended emissions inventory software program that can be used to estimate anticipated emissions associated with land development projects in California. CalEEMod has separate databases for specific counties and air districts. The Kern County database was used in CalEEMod for the proposed project. On-road mobile source emissions were estimated using CalEEMod that incorporates the CARB EMFAC model.

As described above, no new employees would be required for project operations to operate the pipeline and pump station and maintenance activities would be performed by current employees of the WWTP. Furthermore, operation of the pump station and pipeline does not generate area or energy emissions associated with hearths, consumer products, architectural coating, landscaping equipment, natural gas usage, water usage, refrigerants and solid waste. The only source of operational emissions is associated with the electricity usage for the pump station. Therefore, project pump station electricity usage emissions were calculated outside of CalEEMod based on the estimated annual pump station electricity consumption and using the CO₂ intensity factor based on CalEEMod forecasted future year carbon intensities that reflect utility-specific planning considerations, including future integration of renewables for 2026 including SB 100 requirements. Determinations consider the EKAPCD's established thresholds of significance, air district

⁹ The Policy refers to the Addendum to CEQA Guidelines Addressing GHG Emission Impacts For Stationary Source Projects When Serving As Lead CEQA Agency, March 8, 2012.

adopted rules, the CEQA guidelines thresholds, existing regulations, and applicable Tehachapi General Plan policies as described below.

State Plans, Policies, and Regulations

The following regulations have been incorporated into the CalEEMod model and/or GHG calculation methodology:

- **Renewable Portfolio Standards (RPS):** State requirement that specific percentages of electricity sold by utilities come from renewable sources. In 2018, SB100 established that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by the end of 2045. SB 100 also creates new standards for the RPS, increasing required energy from renewable sources for both investor-owned utilities and publicly-owned utilities from 50 percent to 60 percent by the end of 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by the end of 2020, 44 percent by the end of 2024, and 52 percent by the end of 2027.
- **Low Carbon Fuel Standard (LCFS):** Under AB 32, the state identified nine early action measures to reduce GHG emissions. The LCFS is designed to continue to decrease dependence on petroleum fuels and increase the use of low-carbon and renewable alternatives.
- **Pavely II/Low Emission Vehicle III regulations:** CARB adopted regulations that establish increasingly stringent emissions standards for criteria pollutants and GHGs emitted by passenger vehicles. Current standards affect vehicles through the 2025 model year. (Amendments to Title 13, California Code of Regulations Sections 1900, 1956.8, 1960.1, 1961, 1961.1, 1965, 1968.2, 1968.5, 1976, 1978, 2037, 2038, 2062, 2112, 2139, 2140, 2145, 2147, 2235, and 2317, and adopting Sections 1961.2 and 1961.3)
- **Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling:** In 2004, CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling to reduce public exposure to diesel particulate matter emissions (Title 13 California Code of Regulations [CCR] Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure prohibits diesel-fueled commercial vehicles from idling for more than 5 minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Applicable General Plan Policies

The City of Tehachapi implements the following for purposes of reducing GHG emissions (City of Tehachapi 2012). Those policies that are applicable to the proposed project and are capable of being implemented by the proposed project are listed below.

- **Civic Health and Culture Element**
 - Policy CH-11. Maintain and improve Tehachapi's air quality through a variety of measures including GHG emissions reduction measures.
- **Town Form Element**
 - Policy TF-57. Reduce GHG emissions and adapt to climate change with efforts in the following areas:

- **Energy.** Key adaptation strategies will include incentivizing renewable energy installation, facilitating green technology and business, and reducing community-wide energy consumption,
- **Waste.** Key mitigation strategies will include increased composting and recycling, and efforts to reduce waste generation.

Construction and Operation

The emissions of GHGs associated with construction and operation of the proposed project were calculated for the various construction and operational activities using CalEEMod. Construction-related GHG emissions were amortized over a 30-year lifetime and included with the annual operational emissions. As shown in in **Table 2-6**, the proposed project would generate amortized construction GHG emissions of 359 MTCO₂e for the duration of construction, or amortized emissions of 12 MTCO₂e. As shown in **Table 2-7**, the proposed project would generate operational emissions of 95 MTCO₂e for the proposed project's first full buildout year of 2026, inclusive of the amortized construction emissions. As the proposed project's annual GHG emissions would not exceed the threshold of significance of 25,000 metric tpy, emissions impacts with respect to the generation of GHGs would be less than significant.

TABLE 2-6
ESTIMATED CONSTRUCTION GREENHOUSE GAS EMISSIONS

Year	MTCO ₂ e per Year ^{a,b}		
	Construction Emissions	Water Conveyance for Dust Control	Total
2025	359	<0.1	359
Amortized Emissions (30-years)	12	<0.01	12

SOURCE: ESA 2024

NOTES:

- Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix GHG of this IS/MND.
- CO₂e emissions are calculated using the global warming potential values from the Intergovernmental Panel on Climate Change Fourth Assessment Report: 25 for CH₄ and 298 for N₂O (Intergovernmental Panel on Climate Change, Fourth Assessment Report: The Physical Science Basis, Summary for Policy Makers, (2007)).

TABLE 2-7
ESTIMATED MAXIMUM OPERATIONAL GREENHOUSE EMISSIONS
(TONS PER YEAR) – YEAR 2026 ^a

Source	Project (MTCO ₂ e/year)
Electricity	83
Amortized Project Construction Emissions	12
Total Emissions:	95
Significance Threshold	25,000
Exceed Screening Level?	No

SOURCE: ESA 2024

NOTE:

- Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix GHG of this IS/MND. Area, energy, waste, and water emissions are conservatively taken from 2023 modeling run which is conservative as impacts would be lower than those analyzed due to the use of a more energy-efficient buildings and cleaner burning landscaping vehicle fleet mix over time pursuant to State regulations.

As in Section 1, *Project Description* of this IS/MND, the proposed project would allow for the change of the location of application of the secondary treated effluent produced at the WWTP from the agricultural fields near the Tehachapi Municipal Airport to a new location south of the Borrow Pit. By allowing the City to continue supplying water to agricultural uses with treated wastewater effluent through the pump station that is powered by electricity, the proposed project would support the 2022 Scoping Plan's specific action to reduce GHG emissions from the agricultural sector through increasing the electrification of the State's agricultural sector's energy demand to 25% by 2030 and 75% by 2045 (CARB 2022). Thus, the proposed project would be consistent with the 2022 Scoping Plan's action to reduce energy-related GHG emissions from the agricultural sector. In addition, as mentioned above, the proposed project would also be consistent with the other State and local plans, policies, and regulations as the proposed project would comply with California's current RPS legislation SB100, the LCFS and the Pavely II/Low Emission Vehicle III regulations that are reflected into the proposed project's GHG emissions modeling and modeling calculations. Therefore, the proposed project is consistent with the adopted State and local GHG reduction plans, policies, and regulations currently adopted and in effect. As such, the proposed project, would have less than significant impacts.

References

- California Air Resources Board (CARB). 2017. California's 2017 Climate Change Scoping Plan. https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed July 2024.
- _____. 2022. Final 2022 Scoping Plan for Achieving Carbon Neutrality, November. <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>. Accessed July 2024.
- California Sustainability Alliance. 2008. The Role of Recycled Water In Energy Efficiency and Greenhouse Gas Reduction. https://water-cti.com/pdf/CSARreport_RecycledWater_EnergyEfficiency_2008.pdf. Accessed July 2024.
- City of Tehachapi. 2012. Tehachapi General Plan. <https://www.liveuptehachapi.com/DocumentCenter/View/3184/Combined-General-Plan-2015-reduced?bidId=>. Accessed July 2024.
- East Kern Air Pollution Control District. 2012. Addendum to CEQA Guidelines Addressing GHG Emission Impacts For Stationary Source Projects When Serving As Lead CEQA Agency. <http://www.kernair.org/Documents/CEQA/EKAPCD%20CEQA%20GHG%20Policy%20Adopted%203-8-12.pdf>. Accessed July 2024.
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2.2.9 Hazards and Hazardous Materials

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a) b) Construction

During the construction phase of the proposed project, construction equipment and materials would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. The routine use or an accidental spill of hazardous materials could result in inadvertent releases, which could adversely affect construction workers, the public, and the environment. Construction activities would be required to comply with numerous hazardous materials regulations designed to ensure that hazardous materials are transported, used, stored, and disposed in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies. Contractors would be required to prepare and implement Hazardous Materials Business Plans that would require that hazardous materials used for construction would be used properly and stored in appropriate containers with secondary containment to contain a potential release. The California Fire Code would also require measures for the safe storage and handling of hazardous materials. As discussed above in Section 2.2.7, *Geology and Soils*, construction contractors would be required to prepare a SWPPP for

construction activities in compliance with the Construction General Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site run-on and runoff. The required compliance with the numerous laws and regulations that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for creation of hazardous conditions due to the use or accidental release of hazardous materials, and would result in a less than significant impact.

Operation

Operation of the proposed project would be designed to convey primary and secondary treated effluent from the WWTP to agricultural fields. The current process of treating wastewater to secondary standards consists of land application of the wastewater and would not change as a result of the proposed project. As a result, impacts would be less than significant.

c) **Construction and Operation**

The only school within one-quarter mile of project components is the Monroe High School at 126 South Snyder Avenue, located about 0.20 miles south of the existing 12-inch pipeline connecting the WWTP to the Borrow Pit. However, the project does not propose any changes to this existing pipeline. Therefore, relative to proximity to schools, there would be no impact during construction and operation.

d) **Construction and Operation**

The location of the project components were checked on the state's GeoTracker and EnviroStor websites that track sites that have reported releases of hazardous materials (SWRCB and DTSC 2024). None of the project components are listed on either website. Therefore, relative to being listed as a hazardous materials site, there would be no impact during construction and operation.

e) **Construction and Operation**

The nearest airport to the proposed project area is the Tehachapi Municipal Airport. The Tehachapi airport is located approximately 0.85-mile northwest of the proposed locations for the pump station and the transmission pipeline. The proposed pump station would require a maximum height of 14 feet aboveground while the pipeline would be installed at 3 feet bgs and located underground. The proposed project components would not be high enough to interfere with aircraft. As a result, impacts would be less than significant related to airport safety hazards during construction and operation.

f) **Construction and Operation**

The construction of improvements at the proposed pump station would occur within the Borrow Pit along the west side of Steuber Road and would not require the closure of any roads. Construction of the transmission pipeline would occur within Steuber Road and result in partial closure of traffic lanes. As such, construction of the transmission pipeline could have the potential to impact evacuation plans or routes in the project area. As explained in Section 2.2.17, *Transportation*, implementation of **Mitigation Measure TRA-1** would require agency coordination with emergency service providers in the area in advance of project construction.

Adherence to this mitigation measure would reduce any potential impacts regarding evacuation plans or routes to less than significant levels. Once built and operational, there would be no project-related activities that could impact evacuation plans or routes. Therefore, impacts would be less than significant.

Mitigation Measure

Implement **Mitigation Measure TRA-1** (see Section 2.2.17, *Transportation* below).

g) Construction

The State of California maps areas that are considered Fire Hazard Severity Zones (FHSZs) throughout the state. These hazard areas are described according to their potential to cause fire hazards due to relevant factors such as fuels, terrain, and weather, and provide the basis for application of various mitigation strategies to reduce risks to buildings associated with wildfires. As of November 2008, the California Department of Forestry and Fire Protection (CAL FIRE) determined that Kern County has no “Very High Fire Hazard Severity Zones” within the Local Responsibility Area (LRA) (CAL FIRE 2008). Proposed project activities would occur at the Borrow Pit and along Steuber Road, however, these are not given a fire severity designation and are not located within a FHSZ. The proposed agricultural turnout located at the southwest intersection of Steuber Road and Highline Road is designated as a “Moderate” FHSZ within the State Responsibility Area (SRA). As indicated in response to Issue 2.9 b above, construction could include materials that are considered flammable, such as fuels. The handling and storage of such materials would be conducted in accordance with applicable regulations and BMPs would be implemented to prevent accidental spills and to dictate a response in the case of a spill. Additionally, the project would include the use of equipment such as trucks and drilling rigs for carrying workers and equipment that could spark fires from hot components, such as catalytic converters and/or mufflers, if driven in grassy off-road areas. The California Vehicle Code, Section 38366, requires spark-arresting equipment on vehicles that travel off-road. This code applies to the project because the vehicles that work in off-road areas (e.g., drilling rigs for well installations) will be required to have spark-arresting equipment to reduce the risk of wildfires.

Operation

During operation, there would be no potential to cause a wildfire because there would be no off-road travel. Therefore, potential impacts on people or structures associated with fire hazards would be less than significant.

References

- California Department of Forestry and Fire Protection (CAL FIRE). 2008. *LRA Fire Hazard Severity Zone Maps*. <https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps>, accessed June 26, 2024.
- _____. 2024. *Fire Hazard Severity Zone Viewer*. 2024. *Fire Hazard Severity Zone Viewer* (arcgis.com) <https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/>, accessed June 26, 2024.
- City of Tehachapi. 2004. *Tehachapi Municipal Airport, Master Plan Update*, August.

State Water Resources Control Board (SWRCB) and Department of Toxic Substances Control (DTSC).
2024. GeoTracker and EnviroStor website. accessed June 26, 2024.

2.2.10 Hydrology and Water Quality

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
X. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a) Construction

During the construction phase of the proposed project, construction equipment and commonly-used construction materials such as fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures could adversely affect nearby surface waters and water quality if accidentally spilled. Construction activities would be required to comply with numerous hazardous materials regulations designed to ensure that the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies, is reduced. Additionally, as discussed in above in Section 2.2.7, *Geology and Soils*, construction contractors would be required to prepare a SWPPP for construction activities in compliance with the NPDES Construction General Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site run-on and runoff. The required compliance with the numerous laws and regulations that govern the transportation, use, handling,

and disposal of hazardous materials would limit the potential for creation of hazardous conditions due to the routine use or accidental release of hazardous materials during construction, and would render this impact less than significant.

Operation

As part of the proposed project, the City would change the location of land application of wastewater from the agricultural fields near the Tehachapi Municipal Airport to a new location south of the Borrow Pit. During operation, the transmission pipeline would transport water treated to California Water Code Title 22 Recycled Water Regulations. Similar to existing conditions, the secondary-treated effluent would not be a hazardous material and in the unlikely event of a pipeline break, its release would not adversely affect the water quality of surface water.

Adherence to these requirements and programs would ensure that impacts to the environment and water quality during operation of the proposed project would be less than significant.

b) Construction

Groundwater recharge can be affected when substantial amounts of impervious surfaces are constructed that impede infiltration of stormwater to the underlying aquifer. None of the project components would require substantial amounts of new impervious surfaces. The construction of the Borrow Pit pump station along Steuber Road would add about 2,500 square feet of new impervious hardscape surface. However, all rainwater falling on the new pump station would flow to the surrounding unpaved area and infiltrate into the subsurface, as it does now. The new transmission pipeline would be installed in a narrow trench under Steuber Road; some of the road is paved and some is unpaved dirt.

Operation

The pipeline alignment would be restored to existing conditions, resulting in no change in the amount of impervious surfaces. Since the proposed project would introduce minimal amounts of impervious surfaces, there would be minimal interference with stormwater infiltration. Therefore, there would be no change over existing conditions to the groundwater basin during operation and no impact would occur.

c) i) Construction

As described in Section 1, *Project Description*, the project includes installation of the Borrow Pit pump station, transmission pipeline, and turnout. Ground disturbing activities during construction would include excavation and grading that could result in erosion or siltation. However, as described above in *Hydrology and Water Quality Impact (a)*, the project would be required to prepare and implement a SWPPP in compliance with the NPDES Construction General Permit. The BMPs would control run-on and runoff during construction and prevent erosion and siltation.

Operation

Once constructed, the operation of the project components would not require any more ground disturbance. Relative to erosion and siltation, the impact would be less than significant.

c) ii) Construction and Operation

The proposed project could result in increasing surface runoff due to the addition of new impervious surfaces. As described above under *Hydrology and Water Quality Impact (b)*, the new

Borrow Pit pump station would add 2,500 square feet of new impervious surface. However, rainfall falling on this relatively small area would flow off to the surrounding unpaved area and infiltrate into the subsurface, as it does now. The transmission pipelines would be installed below ground and would not change the existing surface runoff pattern. Therefore, the proposed project would not substantially increase the rate or amount of surface water runoff during construction or operation, and the impact would be less than significant.

c) iii) **Construction and Operation**

As described above under *Hydrology and Water Quality Impact (c.ii)*, the pump stations and transmission pipelines are conveyance infrastructure and would not create or contribute to substantial increases in runoff water. The location of land application of secondary treated effluent produced at the Tehachapi WWTP would change, but the volume would remain the same. As a result, the project would not create or contribute runoff water that would exceed drainage system capacities or provide additional sources of polluted runoff during construction or operation, and the impact would be less than significant.

c) iv) **Construction and Operation**

The proposed project could impede or redirect flood flows if new facilities are built within existing flood zones. The new Borrow Pit pump station would add 2,500 square feet of new impervious surface and a pump station structure. However, this area is not within a 100-year flood zone (FEMA 2008). The transmission pipeline would be located underground and would not be able to affect flood flows. Therefore, the changes relative to the pump stations and transmission pipeline during construction and operation would not impede or redirect flood flows and the impact would be less than significant.

d) **Construction and Operation**

Tsunamis are ocean waves generated by vertical movement of the sea floor, normally associated with earthquakes or volcanic eruptions. The project area is not located near the ocean and therefore would not be susceptible to a tsunami. Seiches are oscillations of enclosed or semi-enclosed bodies of water that result from seismic events, wind stress, volcanic eruptions, underwater landslides, and local basin reflections of tsunamis. The project area is not located near any large water bodies and therefore would not be susceptible to seiches. Thus, construction and operation of the proposed project would not contribute to impacts related to tsunamis and seiches and there would be no impact.

e) **Construction and Operation**

Prior to 1970, the Tehachapi Basin was subject to groundwater overdraft, a situation which resulted in a 1966 legal adjudication of most of the basin that prescribed groundwater pumping rights, and appointed the general manager of the Tehachapi-Cummings County Water District (TCCWD, or the District) as the Watermaster for both the Tehachapi and the Cummings Basins (GSI 2021). Because the basin is adjudicated, there is no sustainable groundwater management or sustainability plan. However, the use of groundwater within the basin is regulated by Watermaster. In response to the adjudication of the basin and the regulation water use by the Watermaster, groundwater levels and the volume of water in storage have increased since the

1980's. The proposed project would continue to recycle the wastewater for use as irrigation water.

The Water Quality Control Plan for the Lahontan Region (Basin Plan) sets forth water quality standards for the surface and ground waters of the Region, which include designating beneficial uses of surface water and groundwater (RWQCB 2021). The proposed project is located within the Tehachapi Valley East Basin. The Basin Plan identifies municipal, agricultural, industrial, and freshwater beneficial uses for water. The proposed project would change the location of application of the secondary treated effluent produced at the Tehachapi WWTP from the agricultural fields near the Tehachapi Municipal Airport to a new location south of the Borrow Pit. However, the volume of water would be the same as existing conditions. This action would be considered a beneficial use of water used for irrigation and agricultural purposes, which would be consistent with the Basin Plan. As a result, construction and operation of the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, no impact would occur.

References

- Federal Emergency Management Agency (FEMA). 2008. *Flood Insurance Rate Map, Map Number 06029C2839E*. September 26, 2008.
- GSI Water Solutions. 2021. *Draft Hydrogeologic Evaluation of Indirect Potable Reuse in the Tehachapi Groundwater Basin*. 2021.
- Regional Water Quality Control Board (RWQCB). 2021. *Water Quality Control Plan for the Lahontan Region*.
https://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.html September 22, 2021.
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2.2.11 Land Use and Planning

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XI. LAND USE AND PLANNING — Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a) Construction and Operation

The physical division of an established community typically refers to the construction of a linear feature, such as a highway or railroad, or removal of a means of access, such as a road or bridge that would impact mobility within or between existing communities. The proposed project, once constructed, would be located underground within local roadway rights-of-way or within the property boundary of the Borrow Pit. Therefore, construction and operation of the proposed project would not create a barrier or physically divide an established community and no impact would occur.

b) Construction and Operation

The proposed project facilities are located both in the City of Tehachapi and in Kern County. The proposed pump station at the existing Borrow Pit would be constructed on land designated and zoned for Light Industrial (M-1) in the City of Tehachapi (City of Tehachapi 2021a). The M-1 zone allows for manufacturing and other similar industrial uses that do not produce undesirable byproducts such as fumes, odor, dust or smoke (City of Tehachapi 2021b). Within this zone, industrial “power / electrical substation” uses are permitted (City of Tehachapi 2021b). Therefore, construction and operation of the proposed project would not introduce new structures at the Borrow Pit that would substantially change existing characteristics at the site and impacts would be less than significant.

The proposed transmission pipeline would generally be constructed within existing rights-of-way (paved and unpaved). General Plans for both the City of Tehachapi and Kern County recognize and value the need for infrastructure, such as water distribution pipelines, to service community demands. Public rights of way are defined as “a strip of land... intended to be occupied or occupied by a road, crosswalk, railroad, electric transmission lines, oil or gas pipeline, water line, sanitary storm sewer or other similar uses” (Kern County Municipal Code, Title 18 Section 18.70.324). As such, installation of the transmission pipeline within City and Kern County rights-of-way would not conflict within any land use policies, plans, or regulations. Additionally, the Project does not require changes in land use designation or zoning for its implementation. No impact would occur with regard to land use plans, policies, or regulations for the proposed pipeline.

References

City of Tehachapi. 2021a. City of Tehachapi Zone Map, August 2021.

<https://www.liveuptehachapi.com/DocumentCenter/View/6098/X1331-1-ZONE-MAP-overall>, accessed June 26, 2024.

City of Tehachapi. 2021b. City of Tehachapi Zoning Code, 2021. [Tehachapi-Zoning-Code-Updated-2021-PDF \(liveuptehachapi.com\)](#), accessed June 26, 2024.

Kern County. 2024. California Municipal Code. Codified through Ordinance No. G-8985, passed January 5, 2021. (Supp. No. 52).

https://library.municode.com/ca/kern_county/codes/code_of_ordinances?nodeId=TIT18LADI_CH18.70DE_18.70.324RI-W, accessed June 26, 2024.

2.2.12 Mineral Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a, b) **Construction and Operation**

According to Mineral Land Classification (MLC) studies prepared by the California Geologic Survey (CGS), the project site is not located in a Mineral Resource Zone (DOC 1999). Construction of the proposed project would occur within the Borrow Pit and roadway rights-of-way (See Section 1.6, *Project Construction*). The proposed project would not involve construction in areas that are used for mineral extraction or known as locally important resource recovery sites. Therefore, construction and operation of the proposed project would not result in the loss of availability of a known mineral resource. No impact would occur.

References

California Department of Conservation (DOC). 1999. Mineral Land Classification of Southeastern Kern County, California – Plate 2A.

2.2.13 Noise

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XIII. NOISE — Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) The proposed project is located in a partially urbanized area surrounded by rural land uses. The proposed project is located both within the jurisdiction of the City of Tehachapi, as well as unincorporated Kern County, located in southeastern Kern County. The proposed project would change the location of application of the secondary treated effluent produced at the WWTP from the agricultural fields near the Tehachapi Municipal Airport to a new location south of the Borrow Pit. An existing 12-inch force main would be used to convey the secondary-treated water to the Borrow Pit area. The proposed project would construct a new pump station at the Borrow Pit and a new pipeline to convey treated wastewater effluent from the existing Borrow Pit to the new agricultural turnout located at the southwest intersection of Steuber Road and Highline Road. The proposed transmission pipeline would be installed within the rights-of-way of Steuber Road.

The proposed project would generate noise that could increase the ambient noise levels during both construction and operational phases, due to stationary and mobile noise sources both onsite and offsite. For purposes of this analysis, the ambient noise levels at the closest sensitive receptors to the project components in each jurisdiction (City of Tehachapi and Kern County) were analyzed. Any receptors located at greater distances would experience lower noise levels and impacts would be less than those disclosed. The following locations are the closest sensitive receptors within each jurisdiction:

- **City of Tehachapi:** Baymont by Wyndham Hotel (hotel) located approximately 370 feet northeast of the proposed pump station at the Borrow Pit and approximately 560 feet north of the proposed transmission pipeline.
- **Kern County:** Single-family residences located approximately 50 feet from the proposed transmission pipeline and 625 feet from the proposed pump station at the Borrow Pit along Steuber Road.

Noise Principles and Descriptors

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air). Noise is generally defined as unwanted sound (i.e., loud, unexpected, or annoying sound). Acoustics is defined as the physics of sound. In acoustics, the fundamental scientific model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. Acoustics addresses primarily the propagation and control of sound (Caltrans 2013, Section 2.2.1).

Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement. The dB scale is a logarithmic scale (i.e., not linear) that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of feeling and pain, respectively. In a non-controlled environment, a change in sound level of 3 dB is considered “just perceptible,” a change in sound level of 5 dB is considered “clearly noticeable,” and a change in 10 dB is perceived as a doubling of sound volume (Caltrans 2013, Section 2.1.3). Pressure waves traveling through air exert a force registered by the human ear as sound (Caltrans 2013, Section 2.1.3).

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. When assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 hertz (Hz) and above 5,000 Hz in a manner corresponding to the human ear’s decreased sensitivity to extremely low and extremely high frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements (Caltrans 2013, Section 2.1.3).

An individual’s noise exposure is a measure of noise over a period of time, whereas a noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic. What makes community noise variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual. These successive additions of sound to the community noise environment change the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts (Caltrans 2013, Section 2.2.2.1).

The time-varying characteristic of environmental noise over specified periods of time is described using statistical noise descriptors in terms of a single numerical value, expressed as dBA. The most frequently used noise descriptors are summarized below (Caltrans 2013, Section 2.2.2.2):

- L_{eq}:** The L_{eq}, or equivalent continuous sound level, is used to describe the noise level over a specified period of time, typically 1-hour, i.e., L_{eq(1)}, expressed as L_{eq}. The L_{eq} may also be referred to as the “average” sound level.
- L_{max}:** The maximum, instantaneous noise level.
- L_{min}:** The minimum, instantaneous noise level.
- L_x:** The noise level exceeded for specified percentage (x) over a specified time period; i.e., L₅₀ and L₉₀ represent the noise levels that are exceeded 50 and 90 percent of the time specified, respectively.
- L_{dn}:** The L_{dn} is the average noise level over a 24-hour day, including an addition of 10 dBA to the measured hourly noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account nighttime noise sensitivity. L_{dn} is also termed the day-night average noise level or DNL.
- CNEL:** Community Noise Equivalent Level (CNEL), is the average noise level over a 24-hour day that includes an addition of 5 dBA to the measured hourly noise levels between the evening hours of 7:00 p.m. to 10:00 p.m. and an addition of 10 dBA to the measured hourly noise levels between the nighttime hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity during the evening and nighttime hours, respectively. CNEL and L_{dn} noise levels typically differ by less than 1 dBA and are generally interchangeable.

Kern County General Plan

The Noise Element of the Kern County General Plan (County of Kern 2009) provides goals, policies, and implementation measures applicable to noise, which, as related to the project, are provided below. The major purpose of the County’s Noise Element is to establish reasonable standards for maximum noise levels desired in Kern County, and to develop an implementation program which could effectively mitigate potential noise problems and not subject residential or other sensitive noise land uses to exterior noise levels in excess of 65 dBA L_{dn}, and interior noise levels in excess of 45 dBA L_{dn}. For construction, the Kern County Code of Ordinances includes acceptable hours of construction as discussed below. Applicable goals, policies, and implementation measures from the County’s General Plan that are relevant to the proposed project are summarized below.

Chapter 3. Noise Element, Section 3.3 Sensitive Noise Areas

Goals

Goal 1: Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.

Goal 2: Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.

Policies

Policy 1: Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses,

Policy 3: Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise,

Policy 4: Utilize good land use planning principles to reduce conflicts related to noise emissions.

Policy 7: Employ the best available methods of noise control.

Implementation Measures

Measure A: Utilize zoning regulations to assist in achieving noise-compatible land use patterns.

Measure C: Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policies outlined in this element.

Measure F: Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise-sensitive land uses to exterior noise levels in excess of 65 dB L_{dn} and interior noise levels in excess of 45 dB L_{dn} .

Kern County Code of Ordinances

The Kern County Code of Ordinances, Chapter 8.36 (Noise Control), includes acceptable hours of construction, and limitations on construction related noise impacts on adjacent sensitive receptors. Noise producing construction activities that are audible to a person with average hearing ability at a distance of 150 feet from the construction site, or if the construction site is within 1,000 feet of an occupied residential dwelling, are prohibited between the hours of 9:00 p.m. to 6:00 a.m. on weekdays, and 9:00 p.m. to 8:00 a.m. on weekends. However, the following exceptions are permitted:

1. The resource management director or a designated representative may for good cause exempt some construction work for a limited time.
2. Emergency work is exempt from this section.

City of Tehachapi General Plan

The City of Tehachapi implements the following policies that are applicable to the project related to noise.

Community Safety Element

Policy CS-65: Incorporate the following into Tehachapi's Noise Ordinance:

- a. Require that applicants for new noise-sensitive development in areas subject to noise levels greater than 65 dB CNEL, obtain the services of a professional acoustical engineer to provide a technical analysis and design of appropriate mitigation measures;
- b. Limit the maximum noise levels during evening hours from commercial/industrial development to 75 dB(A);

- c. Require placement of fixed equipment, such as air conditioning units and condensers, inside or in the walls of new buildings or on roof-tops of central units in order to reduce noise impacts on any nearby sensitive receptors;
- d. Maintain appropriate noise-emission standards in connection with the purchase, use, and maintenance of City vehicles;
- e. Require control of noise or mitigation measures for any noise-emitting construction equipment or activity.

The City's Noise Element indicates that exterior and interior noise measurement standards are not provided in the Tehachapi Noise Ordinance. Therefore, noise levels defer to the guidance from the State of California and should inform the development of standards to support the community vision. **Table 2-8** lists the acceptable range of noise levels by land use category and is based on State General Plan Guidelines.

TABLE 2-8
ACCEPTABLE NOISE LEVELS BY LAND USE CATEGORY

Land Use	Community Noise Exposure CNEL (dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single-Family, Duplex, Mobile Homes	50 to 60	55 to 70	70 to 75	Above 75
Multi-Family Homes	50 to 65	60 to 70	70 to 75	Above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 to 65	55 to 70	70 to 80	Above 80
Transient Lodging—Motels, Hotels	50 to 65	55 to 70	70 to 80	Above 80
Auditoriums, Concert Halls, Amphitheaters	—	50 to 70	—	Above 65
Sports Arena, Outdoor Spectator Sports	—	50 to 70	—	Above 65
Playgrounds, Neighborhood Parks	50 to 70	—	60 to 75	Above 70
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 to 75	—	65 to 80	Above 80
Office Buildings, Business and Professional Commercial	50 to 70	60 to 75	Above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50 to 75	65 to 80	Above 80	—

SOURCE: California Office of Planning and Research, Office of Noise Control, *General Plan Guidelines*

NOTES:

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

City of Tehachapi Noise Ordinance

Tehachapi's noise ordinance provides noise guidelines and standards to address the issues associated with significant sound-generators. The ordinance limits building construction activities including the operation of any pile driver, steam shovel, pneumatic hammer, derrick, steam or

electric hoist between the hours of 7:00 p.m. and 8:00 a.m. within a residential zone or within a radius of 500 feet. These standards are provided to limit noise during sensitive time periods.

Construction (On-Site)

Project construction is expected to commence in March 2025 and would last through September 2025. Noise from construction activities would be generated by the operation of vehicles and equipment involved during various stages of construction of the transmission pipeline and pump station. The noise levels generated by construction equipment would vary depending on factors such as the type and number of equipment, the specific model (horsepower rating), the construction activities being performed, and the maintenance condition of the equipment. To more accurately characterize construction-period noise levels, the average (Hourly L_{eq}) noise level associated with each construction phase is estimated based on the quantity, type, and usage factors for each type of equipment used during each construction phase and are typically attributable to multiple pieces of equipment operating simultaneously. Over the course of a construction day, the highest noise levels would be generated when multiple pieces of construction equipment are operated concurrently.

As previously stated, the closest sensitive receptors to the project site are the hotel located in the City of Tehachapi approximately 370 feet northeast of the proposed pump station at the Borrow Pit and 560 feet north of the proposed transmission pipeline, and the single-family residences located along Steuber Road in Kern County approximately 50 feet from the proposed transmission pipeline and 625 feet from the proposed pump station at the Borrow Pit. It is conservatively assumed that multiple pieces of construction equipment would operate simultaneously at the closest distance to the sensitive receptor locations. In reality, equipment would likely be dispersed throughout the project area along the proposed transmission pipeline alignment and the pump station; therefore, the calculated noise levels represent a conservative maximum and actual noise levels would be lower. The closest sensitive receptors in each affected jurisdiction were analyzed; sensitive receptors located at further distances than analyzed would experience lower noise levels than those disclosed below. Generally, noise attenuates at a rate of 6 dBA for every doubling of distance from the noise source for acoustically hard or reflective surfaces.¹⁰ **Table 2-9** presents the results of construction noise modeling for each of the project components. **Appendix NOI** provides a detailed list of construction equipment, quantities of equipment, reference noise levels, and assumed distances.

¹⁰ Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, referred to as “spherical spreading.” Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (i.e., reduce) at a rate between 6 dBA for acoustically “hard” sites for each doubling of distance from the reference measurement, Caltrans, Technical Noise Supplement, September, 2013.

TABLE 2-9
ESTIMATED CONSTRUCTION NOISE LEVELS AT NEAREST SENSITIVE RECEPTORS
(ESTIMATED HOURLY NOISE LEVEL L_{eq} (DBA))

Construction Phase	City of Tehachapi - Hotel	Kern County - Residences
Pipelines	66.1	87.1
Pump Station	67.2	62.7
Max Overlapping Phase (Pipelines + Pump Station)	69.5	87.1

SOURCE: ESA 2024

NOTE:

Other project components are located further away from sensitive receptors and noise levels would be less than disclosed above.

The peak construction noise levels experienced by the off-site sensitive receptors would be up to 69.5 and 87.1 dBA L_{eq} . As shown in Table 2-9, estimated construction noise levels at the hotel receptor in the City of Tehachapi could be up to 69.5 dBA L_{eq} , and estimated construction noise levels at the nearest residential receptors located in Kern County would be up to 87.1 dBA L_{eq} . The City of Tehachapi limits construction noise to between the hours of 8:00 a.m. and 7:00 p.m. within a residential zone or within a radius of 500 feet. The portions of the project site within Kern County would be subject to limiting noise-producing construction activities between the hours of 6:00 a.m. to 9:00 p.m. Monday through Friday and 8:00 a.m. to 9:00 p.m. on weekends. Construction activities for the proposed project would occur between 8:00 a.m. to 7:00 p.m. Monday through Friday; weekend and nighttime construction is not expected. Therefore, the project construction would occur within the allowable hours for the City of Tehachapi and Kern County and in compliance with the noise ordinance of both jurisdictions.

Construction activities associated with the proposed project would generate periodic noise levels above the normally acceptable noise levels listed in Table 2-8 for all land use categories. As noted in Table 2-8, construction noise could exceed 65 dBA at the residential sensitive receptor in Kern County along Steuber Road. It should be noted that the increase in noise levels at the off-site locations during construction at the project site would be temporary in nature and would not generate continuously high noise levels, although occasional short-term disturbances from construction are possible. Additionally, while the estimated construction noise levels at each of the off-site locations would be the loudest when construction activities are occurring at an area within the project site that is nearest to the off-site sensitive receptor locations, the noise levels at these locations would be lower for the majority of the construction time as construction activities conclude or move to another more distant location of the project site (e.g., at locations along the proposed transmission pipeline alignment and the pump station further away from the receptor locations). In compliance with the City of Tehachapi's Policy CS-65 of the General Plan's Community Safety Plan, **Mitigation Measure NOI-1** would be required to reduce noise levels. Because construction of the proposed project would comply with the hourly limitations identified in the County's and City's noise-control ordinances, impacts would be less than significant with mitigation.

Mitigation Measures

NOI-1: This measure shall apply to project construction activity located within unincorporated Kern County and within 1,000 feet of sensitive receptors, including those along Steuber Road within Kern County's jurisdiction. The City shall implement the following measures to reduce temporary construction related noise impacts:

1. Equipment staging shall be located in areas that will create the greatest distance between construction-related noise sources and the noise sensitive receptor to the extent practical. The project contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptor, where feasible.
2. The contractor shall ensure all construction equipment is equipped with manufacturers approved mufflers and baffles, where feasible.

Construction (Off-Site)

During all phases of construction, haul and vendor truck trips would be required to transport construction materials to and from the project site. During the most intensive phases of overlapping construction (paving for Transmission Pipeline and building construction for the Pump Station), the project would require 40 worker and 30 vendor trips per day. The temporary addition of the number of trips required per day during construction activities would result in noise levels of 56.1 dBA CNEL and would be within the normally acceptable noise levels for all land uses listed in Table 2-8 and would occur within the allowable construction hours for both the County and the City. Additionally, the off-site truck activities are temporary in nature and would only take place for project construction, after which the project would cease to have any significant lasting noise impact on the surrounding areas. Therefore, off-site construction traffic noise impacts would be less than significant, and no mitigation measures would be required.

Operation (On-Site)

Once operational, noise generated by the proposed project would primarily be a result of stationary equipment at the treatment and pump station facilities. Once completed, pipelines would be subterranean and would not produce any perceptible noise levels. The stationary equipment used at the facilities would be completely housed within structures which would shield any sensitive uses from operational noise. The closest sensitive receptor to any stationary source is the hotel along Steuber Road located approximately 370 feet northeast of the proposed pump station at the Borrow Pit. Assuming the operation of four pumps simultaneously within a concrete structure, noise levels at the closest sensitive receptor would be 36 dBA and would not exceed the acceptable noise levels for any land uses listed in Table 2-8.^{11,12} Therefore, operational impacts from stationary sources and pipelines would be less than significant.

¹¹ Uses a reference noise level of 81 dBA for pumps from the FHWA's RCNM User's Guide and a usage factor of 100 percent, assuming that pumps are operated 24 hours a day, 7 days a week. FHWA RCNM User's Guide available at: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf

¹² Assumes stationary equipment is completely housed within a concrete block structure that would provide a sound transmission loss of 34 dBA according to FHWA's Noise Barrier Design Handbook, Section 3.4.2, Table 2-3. Available at: https://www.fhwa.dot.gov/Environment/noise/noise_barriers/design_construction/design/design03.cfm#sec3.4.2

Off-Site Traffic Noise

There would be no additional vehicle trips attributed to operation of the project beyond existing vehicle trips. Therefore, operation of the project would not result in any increase in project-related traffic noise levels over existing traffic noise levels in the project vicinity. As a result, project-related operational traffic noise impacts would have no impact.

- b) Ground-borne vibration from development is primarily generated from the operation of construction equipment and from vehicle traffic. Ground-borne vibration propagates from the source through the ground to adjacent buildings by surface waves. Vibration energy dissipates as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. Vibration in buildings is typically perceived as rattling of windows, shaking of loose items, or the motion of building surfaces. The vibration of building surfaces also can be radiated as sound and heard as a low-frequency rumbling noise, known as ground-borne noise. Vibration levels for potential structural damage is described in terms of the peak particle velocity (PPV) measured in inches per second (in/sec). Road vehicles rarely create enough ground-borne vibration amplitude to be perceptible to humans unless the receiver is in immediate proximity to the source or the road surface is poorly maintained and has potholes or bumps. Human sensitivity to vibration varies by frequency and by receiver. Generally, people are more sensitive to low-frequency vibration. Human annoyance also is related to the number and duration of events; the more events or the greater the duration, the more annoying it becomes. Ground-borne vibration related to human annoyance is generally related to root mean square (rms) velocity levels and expressed as velocity in decibels (VdB).

Ground-borne vibration is generally limited to areas within a few hundred feet of certain types of industrial operations and construction/demolition activities such as pile driving. Road vehicles rarely create enough ground-borne vibration amplitude to be perceptible to humans unless the receiver is in immediate proximity to the source or the road surface is poorly maintained and has potholes or bumps. If traffic, typically heavy trucks, does induce perceptible building vibration, it is most likely an effect of low-frequency airborne noise or ground characteristics.

The City of Tehachapi and Kern County do not address vibration either in their respective municipal codes or in the noise policies contained in their General Plans.

Construction

With respect to ground-borne vibration from construction activities, Caltrans has adopted guidelines/recommendations to limit ground-borne vibration based on the age and/or condition of the structures that are located in close proximity to construction activity. With respect to residential and commercial structures, Caltrans' technical publication, titled Transportation- and Construction-Induced Vibration Guidance Manual, provides a vibration damage potential threshold criteria of 0.5 inches per second PPV for historic and older buildings, 1.0 inch-per-second PPV for newer residential structures, and 2.0 inches per second PPV for modern industrial/commercial buildings. In addition, the guidance also sets 0.04 PPV as the threshold for "distinctly perceptible" human response to steady state vibration (Caltrans 2020).

According to the FTA, ground vibrations from construction activities very rarely reach the level that can damage structures. A possible exception is the case of old, fragile buildings of historical significance where special care must be taken to avoid damage. The construction activities that typically generate the most severe vibrations are blasting and impact pile driving, which would not be utilized for the proposed project. The proposed project would utilize construction equipment such as use of skid steer loaders and excavators, which would generate ground-borne vibration during excavation and trenching activities. Based on the vibration data by the FTA, typical vibration velocities from the operation of a large bulldozer would be approximately 0.089 inches per second PPV at 25 feet from the source of activity, 0.031 inches per second PPV at 50 feet distance, and 0.011 inches per second PPV at 100 feet distance.

The nearest off-site single-family residential buildings are located to the east and west of the project's proposed transmission pipeline along Steuber Road, which are approximately 50 feet from the project site. At a distance of 50 feet, the maximum vibration level of 0.031 inches per second PPV (using large bulldozer as described above) would be well below the Caltrans construction vibration structure damage criteria of 0.5 inches per second PPV. The project would not generate vibration levels at nearby buildings that would exceed the 0.5 in/sec PPV structural damage threshold or the 0.035 inches per second PPV "distinctly perceptible" human response threshold. Therefore, construction vibration impacts would be less than significant.

Operation

Once construction activities have been completed, there would be no substantial sources of vibration activities from the project facilities. The project's operations would include industrial-grade stationary mechanical and electrical equipment, such as pumps, compressor units, and exhaust fans, which would produce limited levels of vibration. Ground-borne vibration generated by each of the above-mentioned equipment and activities would generate approximately up to 0.0014 inches per second PPV at locations adjacent (within 50 feet) to the project (ASHRAE 1999). The potential vibration levels from all project operational sources at the closest existing building and human annoyance receptor locations would be less than the significance criteria for building damage and human annoyance of 0.5 inches per second PPV and 0.035 inches per second PPV, respectively as the closest sensitive receptors to stationary equipment generating vibration are approximately 370 feet away from the proposed pump station. Once constructed, the transmission pipelines would not result in any perceptible levels of vibration. As such, vibration impacts associated with operation of the project would be less than significant.

c) Construction and Operation

Portions of the project site are located within 2-miles of the Tehachapi Municipal Airport and the Mountain Valley private airstrip. The project is located outside of all of the identified airport protection zones as illustrated on Tehachapi's Airport Influence Map and is not within identified noise contours of the Tehachapi Municipal Airport (Kern County 2012). Furthermore, all construction activity locations are outside of the Mountain Valley private airstrip's 65 dBA CNEL contours. As construction and operation of the project will not expose people residing or working on the project site to excessive noise levels, no project impacts would occur.

References

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- California Department of Transportation (Caltrans). 2020. Transportation- and Construction-Induced Vibration Guidance Manual. April 2020. [Microsoft Word - 0_CVM_April_2020_03-19-30 \(ca.gov\)](#). Accessed July 2024.
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2.2.14 Population and Housing

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XIV. POPULATION AND HOUSING — Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) **Construction and Operation**
- The proposed project would be limited to the provision of water supply infrastructure. No housing or commercial development is proposed that could directly affect the number of residents or employees in the project area. During peak construction activities, the project would require a maximum of 10 workers. However, construction activities would be temporary, and workers would be from the local workforce. Operation and maintenance of the proposed project would not require new employees and regular employees of the WWTP would periodically visit the pump station at the Borrow Pit for maintenance activities. There would be no need for a relocated workforce. Thus, the proposed project would not directly introduce a substantial amount of unplanned population growth to the area.
- In addition, the proposed project would not indirectly induce growth or remove an obstacle to growth. Future increases in population within the City of Tehachapi would occur in accordance with the 2035 buildout as planned and described in the General Plan (City of Tehachapi 2012). Construction and operation of the proposed project would not modify the water supply and would therefore not indirectly induce population growth. No impact would occur.
- b) **Construction and Operation**
- The proposed project would be constructed within existing rights-of-way and within property lines where existing water supply and water storage facilities are located. Therefore, construction and operation of the proposed project would not require demolition of any existing houses and would not displace people or their housing. No impact would occur.

References

City of Tehachapi. 2012. General Plan.
<https://www.liveuptehachapi.com/DocumentCenter/View/3184/Combined-General-Plan-2015-reduced?bidId=>. Accessed June 26, 2024.

2.2.15 Public Services

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XV. PUBLIC SERVICES —				
a) 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 following public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a.i) Construction and Operation

The Kern County Fire Department (KCFD) provides fire suppression and emergency medical services to the project site and surrounding area. KCFD Stations 12 and 13, located at 800 South Curry Street and 21415 Reeves Street in the City of Tehachapi, are the nearest fire stations to the proposed project (KCFD 2024). Proposed project sites at the Borrow Pit and existing roadways would be, at maximum, a 3.5-mile drive from a station in the event that fire suppression services are needed. As such, KCFD would be able to maintain acceptable emergency response times during proposed construction and operation and maintenance activities. KCFD stations in surrounding areas have adequate service capacity to support the proposed project. Therefore, the proposed project would not result in the need for additional fire protective services beyond what is already provided. No impact would occur.

a.ii) Construction and Operation

Police protection services for the proposed project would be provided by the City of Tehachapi Police Department located in downtown Tehachapi at 220 W. C Street, and the Kern County Sheriff's Department located approximately 2 miles west of the City of Tehachapi at 22209 Old Town Road. The close proximity between the proposed project and nearby police stations would allow for acceptable response times in the event that police protection services are needed. The proposed project would not involve construction of housing or otherwise contribute to an increase in population. Therefore, construction and operation of the proposed project would not require new or expanded law enforcement facilities. No impact would occur.

a.iii) Construction and Operation

The proposed project would not involve construction of housing or otherwise contribute to an increase in population that would change existing demand for school services. Once built and

operational, there would be no project-related activities that could impact schools. No impact would occur.

a.iv) **Construction and Operation**

The proposed project would not involve construction of housing or otherwise contribute to an increase in population that would prompt a need for new parks. Once built and operational, there would be no project-related activities that could impact parks. No impact would occur.

a.v) **Construction and Operation**

The proposed project would not introduce new housing or businesses to the area that would require any additional services or public facilities. Once built and operational, there would be no project-related activities that could impact other public facilities. No impact would occur.

References

Kern County Fire Department (KCFD). 2024. Fire Stations. <https://kerncountyfire.org/about-kcfd/fire-stations/>, accessed June 26, 2024.

2.2.16 Recreation

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a) **Construction and Operation**

The project site does not contain any recreational facilities. The proposed project would not result in direct or indirect growth in population or housing and is not expected to impact existing neighborhood or regional parks or any other recreational facilities due to increases in park usage. Once built and operational, there would be no project-related activities that could impact parks or recreational facilities. No impact would occur.

b) **Construction and Operation**

The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities. Once built and operational, there would be no project-related activities that could impact parks or recreational facilities. No impact would occur.

2.2.17 Transportation

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

a) Construction

The City of Tehachapi General Plan Mobility and Public Realm Elements include plans and policies related to traffic and transportation (City of Tehachapi 2012a). The Kern County General Plan Circulation Element contains applicable policies related to transportation and traffic (Kern County 2009). Applicable policies are included below.

City of Tehachapi Mobility Element

- **Policy M6:** Maintain / generate context-related level of service standards for each street type within Tehachapi's sphere of influence.

City of Tehachapi Public Realm Element

- **Policy PR-7:** Maintain bicycle access-types (class 1, 2 or 3) on all thoroughfare types including grade separations.

County of Kern General Plan Circulation Element

- Highway Plan 2.3.3, Implementation Measure B) Continuity and integrity of the arterial and collector system at the mountain/valley region and the mountain/desert region boundary must be reviewed and approved in conjunction with project adoption on an individual basis.
- Future Growth, 2.3.4, Implementation Measure C): Project development shall comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.
- Congestion Management Programs, 2.3.10, The elements within the Kern Congestion Management Program are to be implemented by each incorporated city and the County of Kern. Specifically, the land use analysis program, including the preparation and adoption of deficiency plans is required. Additionally, the adoption of trip reduction and travel demand strategies are required in the Congestion Management Program.

According to the City of Tehachapi Bicycle Master Plan and the Kern County Transit System Map, no bicycle facilities or public transit routes coincide with proposed construction areas (City

of Tehachapi 2012b; County of Kern 2021). Additionally, none of the proposed project facilities would be located in a City of Tehachapi “pedestrian shed” as identified in the General Plan, which are areas within which a key central amenity such as a park or some small shops would be within a five-minute walk of most neighborhood residents (City of Tehachapi 2012a). As a result, no impact would occur to public transit, bicycle, or pedestrian facilities.

Potential effects to the circulation system would be limited to the construction phase of the proposed project. During installation of the proposed transmission pipeline within roadway rights-of-way of Valley Boulevard and Steuber Road, partial closure of traffic lanes would be required. As such, the proposed project could have the potential to create temporary delays and/or detours for vehicles traveling along these roadways. Construction for the proposed pipeline would be temporary and occur over approximately four months. Nevertheless, the potential impacts from delays and detours associated with installation of the pipeline within Steuber Road and Valley Boulevard are potentially significant. Construction of all other components would not occur in existing roadway rights-of-way and no other traffic lane closures are anticipated. To lessen the impacts related to the circulation system as a result of construction of the transmission pipeline within public rights-of-way, the City would implement **Mitigation Measure TRA-1**, which would require the preparation and implementation of a Traffic Control Plan. With implementation of **Mitigation Measure TRA-1**, impacts would be reduced to a less than significant level.

During construction of all project facilities, temporary truck and vehicle trips would be required to transport workers and equipment to the project sites, as well as haul soil away from project sites. In general, equipment would be transported to each construction site at the beginning of each phase, stored on-site, and would be removed once construction is completed. Within the proposed project area, annual average daily traffic ranges from 920 to 8,562 in the vicinity of the Borrow Pit and pipeline installation within Steuber Road (Kern Council of Governments 2024). With implementation of the project, approximately 20 workers (40 daily vehicle trips) would travel to/from the project site during the peak construction period. Export of excess soils and waste following construction of various project components would also be required, and would be hauled from the project sites and transported along existing roads/highways surrounding the project site. Materials would be delivered to nearby waste disposal facilities as described in the discussion in Section 2.2.19, *Utilities and Service Systems*, Impact (d). It is estimated that the project would require a maximum total of approximately 6 trucks (or 12 daily truck trips) to haul excess soils and wastes during the peak construction phase, as well as a maximum of 14 trucks (or 28 daily truck trips) to deliver materials during the peak construction phase. The delivery of materials and equipment and hauling of exported soils would result in intermittent lessening of roadway capacities due to slower movements and larger turning radii of the trucks compared to passenger vehicles. Nevertheless, maximum daily trips associated with construction of concurrent project facilities of up to 70 average daily truck and vehicle trips would be minimal when spread out over the project area and within the existing baseline daily trips ranging from 920 to 8,562. Since the vehicle and truck trips generated during construction would be temporary and minor relative to existing circulation system capacity in the project area, and because implementation of **Mitigation Measure TRA-1** would be required during installation of the proposed transmission

pipeline, the proposed project would not conflict with any program plans, ordinance, or policy addressing the circulation system. Impacts would be less than significant.

Operation

Once construction is completed, regular employees of the WWTP would periodically visit the pump station at the Borrow Pit for maintenance activities and no new trips would be needed. The proposed transmission pipeline would be located underground and rights-of-way surfaces would be restored after construction. As such, increased traffic volume that would result from operating the proposed project would not have a substantial impact on local circulation system performance. Therefore, impacts would be less than significant.

Mitigation Measure

TRA-1: Prior to the start of construction, the City shall require the construction contractor to prepare and have approved a Traffic Control Plan. The Traffic Control Plan will show all signage, striping, delineated detours, flagging operations, and any other devices that will be used during installation of the proposed transmission pipeline to guide motorists, bicyclists, and pedestrians safely through the construction area and allow for adequate access and circulation. The Traffic Control Plan shall be prepared to ensure that emergency access will not be restricted. The City shall also notify local emergency responders of any planned partial or full lane closures required for project construction. Emergency responders include fire departments, police departments, and ambulances that have jurisdiction within the project area. Written notification and disclosure of lane closure location must be provided at least 30 days prior to the planned closure to allow emergency response providers adequate time to prepare for lane closures.

b) Construction

VMT is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person. OPR has published the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, and the recommended significance criteria for the operation of new projects is to generate 15 percent less VMT per capita (or per employee) compared to existing conditions (OPR 2018). Neither the Governor's Office of Planning and Research (OPR) nor the City of Tehachapi have adopted specific VMT metrics or thresholds of significance for construction-related traffic. Many jurisdictions in Southern California consider construction-related traffic to cause adverse but not lasting intersection deficiencies because, while sometimes inconvenient, construction-related traffic efforts are temporary.

As documented above in the discussion for *Transportation Impact (a)*, construction of the proposed project would generate a maximum of 30 vendor truck trips per day and 40 worker trips per day for a total of 70 trips. Since construction of the proposed project would generate temporary vehicle trips during the 5-month construction period, the proposed project would result in a less than significant impact with respect to VMT.

Operation

Once construction is completed, regular employees of the WWTP would periodically visit the pump station at the Borrow Pit for maintenance activities and no new trips would be needed. These nominal vehicle trips during operation and maintenance would not exceed OPR's

recommended significance thresholds for operational VMT. Therefore, impacts would be less than significant.

c) **Construction and Operation**

The proposed project would not permanently modify any roadway designs or introduce incompatible vehicles. Any disturbance to roadways during transmission pipeline construction would be restored to pre-construction conditions. Once built and operational, there would be no project-related activities that would increase hazards due to a geometric design feature or incompatible uses. Impacts would be less than significant.

d) **Construction and Operation**

The proposed project would result in detours and delays during construction of the transmission pipeline in Valley Boulevard and Steuber Boulevard. Implementation of **Mitigation Measure TRA-1** would require agency coordination with emergency service providers in the area in advance of project construction. Adherence to this mitigation measure would reduce any potential impacts regarding emergency services to less than significant levels. Once built and operational, there would be no project-related activities that would result in inadequate emergency access. Therefore, impacts would be less than significant.

Mitigation Measure

Implement **Mitigation Measure TRA-1**.

References

City of Tehachapi. 2012a. Tehachapi General Plan.

<https://www.liveuptehachapi.com/DocumentCenter/View/3184/Combined-General-Plan-2015-reduced?bidId=>, accessed June 26, 2024.

_____. 2012b. Final Tehachapi Bicycle Master Plan.

<https://www.liveuptehachapi.com/DocumentCenter/View/2028/Final-BMP?bidId=>, accessed June 26, 2024.

County of Kern. 2009. Kern County General Plan.

https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP_Complete.pdf, accessed June 26, 2024.

_____. 2024. Kern Transit Web Site. <https://kerntransit.org/routes-and-schedules/>, accessed June 26, 2024.

Kern Council of Governments, 2024. Traffic Count Database System online

tool. <https://kerncog.public.ms2soft.com/tcds/tsearch.asp?loc=Kerncog&mod=TCDS>, accessed June 26, 2024.

Office of Planning and Research (OPR), 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. Available: https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf, accessed June 26, 2024.

2.2.18 Tribal Cultural Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XVIII. TRIBAL CULTURAL RESOURCES —				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

On June 25, 2024, letters were sent via certified mail to the Native American groups with whom the City has previously consulted with per Assembly Bill (AB) 52. The letters described the proposed project and included a map depicting the location of the project site. Recipients were requested to reply with any information concerning Native American cultural resources that might be affected by the proposed project. **Table 2-10** and **Appendix TRIBAL** provides an overview of outreach efforts. One tribe responded to the request.

In an email received on July 3, 2024, Eunice Ambriz, a Cultural Resources Technician for the Yuhaaviatam of San Manuel Nation (formerly the San Manuel Band of Mission Indians), indicated that the proposed project is located outside of Serrano ancestral territory and, as such, the Yuhaaviatam of San Manuel Nation will not be requesting to receive consulting party status or to participate in the scoping, development, or review of documents created.

A letter sent to the Coastal Band of the Chumash Nation was unclaimed and was returned to the sender on July 14, 2024. A letter sent to the Kitanmuk & Yowlumne Tejon Indians was unclaimed and was returned to the sender on July 30, 2024.

a.i) **Construction and Operation**

No tribal cultural resources were identified within or adjacent to the project site. Therefore, construction and operation of the project would not cause a substantial adverse change in the significance of a tribal cultural resource, as defined by PRC Section 21074(a), that is listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources. No impact would occur.

TABLE 2-10
SUMMARY OF NATIVE AMERICAN OUTREACH

Tribe	Contact	Title	Date Letter Sent	Response Received
Chumash Council of Bakersfield	Julio Quair	Chairperson	6/25/2024	No
Coastal Band of the Chumash Nation	Gabe Frausto	Chairperson	6/25/2024	No
Kern Valley Indian Community	Brandy Kendricks	Tribal Member Monitor	6/25/2024	No
Kern Valley Indian Community	Robert Robinson	Chairperson	6/25/2024	No
Kitanemuk & Yowlumne Tejon Indians	Delia Dominguez	Chairperson	6/25/2024	No
Northern Chumash Tribal Council	Violet Walker	Chairperson	6/25/2024	No
Quechan Tribe of the Fort Yuma Reservation	Manfred Scott	Acting Chairman – Kw'ts'an Cultural Committee	6/25/2024	No
Quechan Tribe of the Fort Yuma Reservation	Jordan Joaquin	President, Quechan Tribal Council	6/25/2024	No
Quechan Tribe of the Fort Yuma Reservation	Jill McCormick	Historic Preservation Officer	6/25/2024	No
San Fernando Band of Mission Indians	Donna Yocum	Chairperson	6/25/2024	No
Tejon Indian Tribe	Candice Garza	CRM Scheduler	6/25/2024	No
Tule River Indian Tribe	Neil Peyron	Chairperson	6/25/2024	No
Tule River Indian Tribe	Joey Garfield	Tribal Archaeologist	6/25/2024	No
Tule River Indian Tribe	Kerri Vera	Environmental Department	6/25/2024	No
Yuhaaviatam of San Manuel Nation	Eunice Ambriz	Cultural Resources Technician	6/25/2024	Yes

a.ii) Construction and Operation

As indicated above, no known tribal cultural resources have been identified within or adjacent to the project. Therefore, construction and operation of the project would not cause a substantial adverse change in the significance of a tribal cultural resource, as defined by PRC Section 21074a), that has been determined by a lead agency to be significant pursuant PRC Section 5024.1(c). No impact would occur.

2.2.19 Utilities and Service Systems

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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 storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a) Construction and Operation

Water supplies required for construction of the proposed project would be provided by water trucks. The proposed project would generate wastewater during construction, including excess water following trench and pipeline dewatering, and portable toilet waste generated by construction workers. Water collected from dewatering would be reused for dust control purposes. Wastewater generated during construction would be collected within portable toilet facilities, collected by a permitted portable toilet waste hauler and appropriately disposed of at an identified liquid-disposal station. Thus, construction of the proposed project would not necessitate the construction or expansion of water or wastewater facilities. Therefore, construction and operation of the proposed project would not require new or expanded water or wastewater facilities other than those that are proposed as part of the project. Impacts are less than significant.

As discussed for Section 2.2.10, *Hydrology and Water Quality* Impact (c.iii), the project would be required to prepare and implement a SWPPP in compliance with the NPDES Construction General Permit. The BMPs would control run-on and runoff during construction and prevent erosion and siltation. No new storm water facilities would be required during project construction.

Once constructed, the project would result in minimal additional impervious surfaces (see Section 2.2.10, *Hydrology and Water Quality* Impact (b)). Therefore, the proposed project is not expected to generate surface runoff for these components in quantities that would require construction of

new storm drains or expansion of existing off-site storm drains. Impacts would be less than significant.

The proposed project would not require new or expanded electric, gas, or telecommunications service facilities other than those analyzed as part of the project within this document. No impact would occur.

b) **Construction and Operation**

As described above in the discussion for Section 2.2.19, *Utilities and Service Systems* Impact (a), water required for construction would be supplied by imported water trucks. Once constructed, the proposed project would change the location of application of the secondary treated effluent produced at the Tehachapi WWTP from the agricultural fields near the Tehachapi Municipal Airport to a new location south of the Borrow Pit. Therefore, construction and operation of the proposed project would not result in impacts to water supplies. No impact would occur.

c) **Construction and Operation**

The proposed project would be served by the City's WWTP, which has a permitted capacity of 1.25 MGD and an average daily flow of 0.66 MGD. The WWTP has adequate capacity to serve the proposed project in addition to its existing commitments (City of Tehachapi 2024; City of Tehachapi 2012). Therefore, construction and operation of the proposed project would not result in impacts to the WWTP and impacts would be less than significant impact.

d) **Construction and Operation**

Construction of the proposed project would not generate substantial amounts of solid waste that would exceed state or local standards. Excavated soils would be reused as backfill to the extent feasible. However, it is estimated that approximately 231 cubic yards of site preparation-related debris plus 2,102 cubic yards of soil would be disposed of offsite following installation of the project facilities. The construction contractor would be required to dispose of excavated soils and solid wastes in accordance with local solid waste disposal requirements. In compliance with the California Integrated Waste Management Act of 1989 and the California Green Building Code, the proposed project would be required to divert 50 percent of its construction waste from landfills. Once constructed, solid waste generated during operation and maintenance activities would be minimal. The Tehachapi Sanitary Landfill located at 12001 Tehachapi Boulevard accepts both industrial waste and construction/demolition waste and would service the proposed project's waste disposal needs. The landfill has a maximum permitted throughput capacity of 1,000 tons per day, and remaining capacity of 522,298 cubic yards (CalRecycle 2015). The landfill has sufficient capacity to serve the proposed project. Impacts would be less than significant.

e) **Construction and Operation**

The proposed project would comply with all federal, state, and local construction requirements during construction of the proposed project. As described above in the discussion for *Utilities and Service Systems* Impact (d), the proposed project would be required to comply with the California Integrated Waste Management Act of 1989 and the California Green Building Code requiring 50 percent diversion of its construction waste from landfills through reuse and recycling. Operation

and maintenance of the proposed project would generate minimal amounts of solid waste from the advanced treatment of wastewater that would be disposed of appropriately offsite. Therefore, project impacts related to potential noncompliance with solid waste statutes and regulations would be considered less than significant.

References

California Department of Resources Recycling and Recovery (CalRecycle). 2015. Solid Waste Information System (SWIS). Tehachapi Sanitary Landfill (15-AA-0062). <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3896?siteID=710>, accessed June 26, 2024.

City of Tehachapi. 2012. General Plan. <https://www.liveuptehachapi.com/DocumentCenter/View/3184/Combined-General-Plan-2015-reduced?bidId=>, accessed June 26, 2024.

_____. 2024. City Web Page, Wastewater. <https://www.liveuptehachapi.com/92/Wastewater>, accessed June 26, 2024.

2.2.20 Wildfire

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

As of November 2008, the CAL FIRE determined that Kern County has no “Very High Fire Hazard Severity Zones” within the LRA (CAL FIRE 2008). Proposed project activities would occur at the Borrow Pit and along Steuber Road, however, these are not given a fire severity designation and are not located within a FHSZ. The proposed agricultural turnout located at the southwest intersection of Steuber Road and Highline Road is designated as a “Moderate” FHSZ within the SRA.

a) **Construction**

During installation of the transmission pipelines within roadway rights-of-way, partial closures of roadways would temporarily reduce traffic speeds and would have the potential reduce response times for emergency vehicles. Further, proposed transport of construction materials and export of excess soils would temporarily reduce roadway capacities.

Operation

Once construction is completed, operation of the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Preparation of a Traffic Control Plan in accordance with **Mitigation Measure TRA-1** would ensure that emergency access is not impacted by the proposed project and that emergency responders are notified of lane closures by the City prior to construction. Therefore, impacts would be reduced to less than significant with implementation of **Mitigation Measure TRA-1**.

Mitigation Measure

Implement **Mitigation Measure TRA-1**.

b) Construction

As explained above in Section 2.2.9, *Hazards and Hazardous Materials Impacts* (a)(b), construction of the proposed project would require equipment that uses hazardous materials such as petroleum fuels and oil. During project construction, use of construction equipment and vehicles, and use of combustible materials such as diesel fuel could pose a wildfire risk to people and property with possible ignition sources such as internal combustion engines, gasoline-powered tools, and equipment that could produce a spark, fire, or flame. The use of spark-producing construction machinery could expose project workers and contractors to pollutant concentrations from a wildfire resulting in a potentially significant impact. Construction activities would be required to comply with numerous State and local hazardous materials regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment. Additionally, all construction activities and crews must comply with fire protection and prevention requirements specified by the CCR, which includes various measures such as easy accessibility of firefighting equipment, proper storage of combustible liquids, no smoking in service and refueling areas, and worker training for firefighter extinguisher use. Compliance with the regulations discussed above would reduce the impact to a less than significant level.

Operation

Once the transmission pipeline is constructed, rights-of-way would be restored and would be similar to existing conditions. Operation and maintenance of project facilities would not require new employees and regular employees of the WWTP would periodically visit the pump station at the Borrow Pit for maintenance activities. BMPs would be implemented during transport and storage of hazardous materials at the WWTP. Operations and maintenance activities would comply with applicable federal, state, and local standards for handling hazardous materials, fuels, and chemicals. Thus, impacts would be less than significant.

c) Construction and Operation

The construction and operation of the proposed project would not require the installation or maintenance of infrastructure other than the facilities that are proposed by the project and analyzed throughout this IS/MND. No impact would occur.

d) Construction and Operation

As detailed in Section 2.2.7, *Geology and Soils Impact* (a) above, construction of the project would require compliance with the NPDES General Construction Permit for stormwater. In accordance with the requirements of this permit, the project would implement a SWPPP that specifies BMPs and erosion control measures to be used during construction to manage runoff flows. Implementation of the project would not significantly alter drainage patterns compared to existing conditions and runoff from the project sites would continue to be controlled through existing stormwater conveyance systems. Additionally, the project would be implemented primarily within established rights-of-ways and disturbed areas and not within areas with unstable soil. As a result, construction and operation activities within these areas have a low potential to expose construction workers to risk due to downslope flooding or landslides after a fire event. Impacts would be less than significant.

References

California Department of Forestry and Fire Protection (CAL FIRE). 2008. LRA *Fire Hazard Severity Zone Maps*. <https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps>, accessed June 26, 2024._____

2.2.21 Mandatory Findings of Significance

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) As discussed above in Section 2.2.4, *Biological Resources*, the crotch bumble bee, TPM, tricolored blackbird, California legless lizard, coast horned lizard, and loggerhead shrike are all California State Species or Special Concern or California State Threatened Species that have the potential to be impacted by proposed project construction. However, implementation of **Mitigation Measures BIO-1 through BIO-4** would involve measures to identify and avoid these species. The proposed project could also potentially impact riparian vegetation, which could constitute a significant impact to sensitive natural communities. **Mitigation Measure BIO-5** would involve preconstruction migratory bird and raptor nesting surveys to reduce impacts to nesting avian species and active nests. With implementation of these mitigation measures, impacts to special-status species and migratory birds would be reduced to a less than significant impact.

As discussed in Section 2.2.5, *Cultural Resources*, and Section 2.2.7, *Geology and Soils*, proposed ground disturbance has the potential to encounter archaeological and/or paleontological resources, or human remains. However, implementation of **Mitigation Measures CUL-1 through CUL-3** and **Mitigation Measures GEO-1 and GEO-2** would reduce these impacts to less than significant.

Mitigation Measures

Implement **Mitigation Measures BIO-1 through BIO-5; CUL-1 through CUL-3; GEO-1 and GEO-2.**

- b) A cumulative impact could occur if the project would result in an incrementally considerable contribution to a significant cumulative impact in consideration of past, present, and reasonably

foreseeable future projects for each resource area. The projects in the cumulative geographic scope include those listed in **Table 2-11** in and around the project site in the City of Tehachapi. While no direct significant impacts were identified for the proposed project that could not be mitigated to a less than significant level, when combined with other projects within the vicinity, the proposed project may result in a contribution to a potentially significant cumulative impact.

**TABLE 2-11
RELATED PROJECTS FOR CUMULATIVE ANALYSIS**

Project No.	Lead Agency	Name	Location	Project Type	Project Description	Status / Year to be Built
1	City of Tehachapi	2024 Pavement Rehab Project	Downtown Tehachapi	Public Works/Infrastructure	The work consists of street grind and overlay work along various local streets within the City of Tehachapi.	Construction / 2024
2	City of Tehachapi	2023 Pavement Rehab Project	Downtown Tehachapi	Public Works/Infrastructure	The work consists of street grind and overlay work along various local streets within the City of Tehachapi.	Construction / 2024
3	City of Tehachapi	Brentwood Dr. Pedestrian Facilities	Brentwood Drive	Public Works/Infrastructure	Sidewalk, curb ramps, and driveway improvements on both sides of Brentwood Drive between Oakwood Street and Curry Street.	Complete / 2024
4	City of Tehachapi	Tree Planting & Stormwater Capture Project	East Tehachapi Blvd/Valley Blvd/Curry St	Public Works/Infrastructure	Adds approximately 474 trees with plants and stormwater capture along 2.5 miles of bike paths and public spaces.	Complete 2022
5	City of Tehachapi	Dennison Road Bicycle/Pedestrian Corridor Improvements Project	South Dennison Rd.	Public Works/Infrastructure	Installing concrete curb and gutter, sidewalk and pavement construction along Dennison Avenue. The project includes signing and striping improvements, installation of concrete curb ramps, installation of storm drain infrastructure, concrete transition sidewalks, and other various improvements.	Construction / 2024
6	City of Tehachapi	Pinon Street Extension	Pinon Street	Public Works/Infrastructure	Pave an unpaved portion of Pinon Street and install class II bike lane.	Complete / 2023
7	City of Tehachapi	Enhanced Striping Project	City Streets	Public Works/Infrastructure	Replace striping on various streets to meet MUTCD requirements.	Complete / 2023

Project No.	Lead Agency	Name	Location	Project Type	Project Description	Status / Year to be Built
8	California High Speed Rail Authority	California High-Speed Rail System Bakersfield to Palmdale Project Section	City of Tehachapi and Various Kern County Locations	Railway	The Bakersfield to Palmdale Project Section is part of the first phase of the California High-Speed Rail System connecting the Central Valley to the Antelope Valley, closing the existing passenger rail gap over the Tehachapi Mountains. The approximately 80-mile Project Section would travel from Bakersfield through or near the cities of Edison, Tehachapi, Rosemond, Lancaster and Palmdale with proposed stations in Bakersfield and at the Palmdale Transportation Center.	Design

SOURCE: City of Tehachapi 2021; California High Speed Rail Authority 2023

The proposed project would result in no impact or less than significant impacts to aesthetics, agriculture/forestry resources, air quality, energy, greenhouse gas emissions, hydrology and water quality, land use and planning, mineral resources, population/housing, public services, recreation, tribal cultural resources, and utilities and service systems. As a result, cumulative impacts related to these resources would not occur.

Biological resources, cultural resources, paleontological resources (geology and soils), hazards, noise, transportation, and wildfire impacts that could result during project-related construction activities would be short-term in nature. Once constructed, the majority of the project components would either be underground (pipelines) or at the existing Borrow Pit. Compared to the other commercial and residential projects in Table 2-11, the proposed project's impacts would result in minimal aboveground facilities and acres of disturbance, and would not have a considerable contribution to cumulative conditions; and any potential impacts would be lessened with the implementation of mitigation measures. When the potential impacts of the proposed project are viewed in connection with past and ongoing projects, impacts would not be considered cumulatively considerable.

Mitigation Measures

Implement **Mitigation Measures BIO-1 through BIO-5; CUL-1 through CUL-3; GEO-1 and GEO-2, NOI-1, and TRA-1.**

- c) With implementation of mitigation measures NOI-1 and TRA-1 included in this IS/MND, the proposed project would not result in substantial adverse effects to humans, either directly or indirectly.

Mitigation Measures

Implement **Mitigation Measures NOI-1 and TRA-1.**

Appendix AQ

Air Quality Calculations

Tehachapi GSP
Unmitigated AQ Emissions Summary of Construction

Unmitigated Construction Emissions in Tons/Year

YEAR		EMISSIONS (TONS/YEAR)					
		VOC	NOx	CO	SO _x	PM10	PM2.5
2025							
Conveyance Facilities - Pump Stations	Total	0.077862	0.598259	0.748945	0.001901	0.040997	0.026007
	Subtotal	0.078	0.598	0.749	0.002	0.041	0.026
Conveyance Facilities - Pipeline	Total	0.0647	0.4879	0.6177	0.0015	0.0307	0.0205
	Subtotal	0.065	0.488	0.618	0.001	0.031	0.020
Total		0.143	1.086	1.367	0.003	0.072	0.046
Maximum		0.143	1.086	1.367	0.003	0.072	0.046
De Minimis Thresholds		25	25	NA	27	15	15
Exceeds De Minimis?		NO	NO	NO	NO	NO	NO

AQ.1: Assumptions

Project Land Uses

Land Use Type	CalEEMod LandUse Type	CalEEMod LandUse Subtype	Amount	Unit	Building sq.ft.	Acreage
Conveyance Facilities	Parking	Other Non-Asphalt Surface	13.06	1000sqft	13,060	0.30
Pump station (borrow pit)	Parking	Other Non-Asphalt Surface	2.5	1000sqft	2,500	0.06
Pipeline	Parking	Other Non-Asphalt Surface	10.56	1000sqft	10,560	0.24
Total					13,060	

PD

pg 1-5

pg 1-1

Construction Schedule - Overview

Start	End	Total Duration (days)
3/1/2025	7/31/2025	152
Total Construction Site Area (acres)		

Construction Schedule - Detail

Construction Schedule Detail												
Construction Phase		CalEEMod Phase Type	Start Date	End Date	Total Calendar Days	Workdays (5 days/week)	Workdays (5 days/week)	Worker Trips/Max Day (In/Out)	Vendor Trips/Max Day (In/Out)	Total Haul Trips (In/Out)	Max Daily Haul Trucks/Day	Max Daily Haul Trips/Day (In/Out)
Conveyance Facilities												
Conveyance Facilities - Pipelines			3/1/2025	6/30/2025	121	86	86					
Trenching/Excavation/Shoring	Grading/Excavation		3/1/2025	4/7/2025	37	26	26	20	0	50	1	2
Building Construction - Installation of Pipelines/		Building Construction	4/8/2025	6/18/2025	71	52	52	20	2	0	0	0
Site Restoration/Paving	Paving		6/19/2025	6/23/2025	4	3	3	20	28	0	0	0
Testing	Testing/Start Up		6/24/2025	6/30/2025	6	5	5	10	0	0	0	0
						86						
						TRUE						
Conveyance Facilities - Pump Stations												
Site Preparation		Site Preparation	3/1/2025	7/31/2025	152	109	109					
Grading/Excavation	Grading/Excavation		3/1/2025	3/7/2025	6	5	5	20	0	48	5	10
Building Construction - Installation		Building Construction	3/8/2025	4/22/2025	45	32	32	20	0	372	6	12
Paving	Paving		4/23/2025	7/21/2025	89	64	64	20	2	0	0	0
Testing/Start Up	Testing/Start Up		7/22/2025	7/24/2025	2	3	3	20	8	0	0	0
						5	10	0	0	0	0	0
						109						
						TRUE						

Tehapachi GSP
Construction Equipment List
Conveyance Facilities - Pipelines

	Off-Road Equipment	Number	Hours Per Day	Notes
Trenching/Excavation/Shoring	Concrete/Industrial Saw	1	8	Dump Truck, Modeled in CalEEMod as truck trip water truck
	Excavator	1	8	
	Haul Truck	1	8	
	Off-Highway Truck	1	8	
	Plate Compactor	1	8	
	Other Construction Equipment	1	8	
	Tractor/Loader/Backhoe	2	8	
Building Construction - Installation of Pipelines/Backfill	Crane	1	8	water truck, pipe trailer shoring equipment
	Off-Highway Truck	2	8	
	Other Construction Equipment	1	8	
	Plate Compactor	1	8	
	Tractor/Loader/Backhoe	2	8	
Site Restoration/Paving	Tractor/Loader/Backhoe	2	8	
	Paver	1	8	
	Cement and Mortar Mixer	4	8	
	Roller	1	8	
Testing/Start Up				

Worker/Vendors Amounts

Phase	# of workers ¹	# of worker trips/day (In/Out)	Vendor Trips/day (In/Out)
Trenching/Excavation/Shoring	10	20	0
Building Construction - Installation of Pipelines/Backfill	10	20	2
Site Restoration/Paving	10	20	28
Testing/Start Up	5	10	0

Excavation Quantities

Parameters	Amount	
Excavation Volume (Export) (CY)	250	From project PD conservative estimate ESA
Haul Truck Capacity (CY)	10	
Total Haul Trucks Required	25	
Excavation Hauling Days	26	
Total Haul Truck Trips (In/Out)	50	
Total Haul Truck Trips (In/Out) per day	2	

Paving Concrete or Asphalt Quantities

Parameters	Amount	
Area of Paving (acres)	0.24	From construction data needs Assumption by ESA
Thickness (ft)	1.00	
Required Concrete or Asphalt Volume (CY)	392	conservative estimate ESA
Concrete or Asphalt Truck Capacity (CY)	10	
Total Concrete or Asphalt Trucks Required	40	
Total Concrete or Asphalt Truck Trips (In/Out)	80	
Paving Days	3	Included as vendor truck trips during paving phase.
Total Paving Truck Trips (In/Out) per day	28	

Notes:

- 1 Data Needs Form
- 2 [CalRecycle Weights and Volumes](#)
- 3 CalEEMod User's Guide, Appendix C
- 4 Currently assumed construction will use concrete for paving. However, modeling and calculations conservative account for asphalt paving and associated emissions if asphalt is to be used for paving.

Tehapachi GSP
Construction Equipment List
Conveyance Facilities - Pump Stations
Equipment for 1 Pump Station

	Off-Road Equipment	Number	Hours Per Day	Notes
Site Preparation	Excavator	1	8	
	Haul Truck	5	8	Dump Truck, Modeled in CalEEMod as truck trip
	Tractor/Loader/Backhoe	2	8	
	Off-Highway Truck	1	8	water truck
Grading/Excavation	Excavator	1	8	
	Tractor/Loader/Backhoe	2	8	
	Haul Truck	6	8	Dump Truck, Modeled in CalEEMod as truck trip
	Off-Highway Truck	1	8	Water Truck
	Other Construction Equipment	1	8	
Building Construction - Installation	Crane	1	8	
	Off-Highway Truck	2	8	water truck, pipe trailer
	Other Construction Equipment	1	8	shoring equipment
	Plate Compactor	1	8	
	Tractor/Loader/Backhoe	2	8	
Paving	Tractor/Loader/Backhoe	2	8	
	Paver	1	8	
	Cement and Morter Mixer	4	8	
	Roller	1	8	
Testing/Start Up				

Worker/Vendors Amounts

Phase	# of workers ¹	# of worker trips/day (In/Out)	Vendor Trips/day (In/Out)
Site Preparation	10	20	0
Grading/Excavation	10	20	0
Building Construction - Installation	10	20	2
Paving	10	20	8
Testing/Start Up	5	10	0

Assumptions for 1 Pump Station

Site Preparation		
Parameters	Amount	
Site Area (acres)	0.06	From project PD
Site Area (ft ²)	2,500	
Area of Site Prep	1,250	
Site Prep Depth (ft)	5	conservative estimate ESA
Site Prep Debris (CY)	231	
Haul Truck Capacity (CY)	10	conservative estimate ESA
Total Haul Trucks Required	24	
Site Prep Hauling Days	5	From construction data needs
Total Haul Truck Trips (In/Out)	48	
Total Haul Truck Trips (In/Out) per day	10	

Excavation Quantities

Parameters	Amount	
Site Area (ft ²)	2,500	From project PD
Grading Depth (ft)	20	From project PD
Excavation Volume (Export) (CY)	1,852	
Haul Truck Capacity (CY)	10	conservative estimate ESA
Total Haul Trucks Required	186	
Excavation Hauling Days	32	
Total Haul Truck Trips (In/Out)	372	
Total Haul Truck Trips (In/Out) per day	12	

Paving Concrete or Asphalt Quantities

Parameters	Amount	
Area of Paving (acres)	0.06	From project PD
Thickness (ft)	1.00	Assumption by ESA
Required Concrete or Asphalt Volume (CY)	93	
Concrete or Asphalt Truck Capacity (CY)	10	conservative estimate ESA
Total Concrete or Asphalt Trucks Required	10	
Total Concrete or Asphalt Truck Trips (In/Out)	20	
Paving Days	3	
Total Paving Truck Trips (In/Out) per day	8	Included as vendor truck trips during paving phase.

Notes:

- 1 Data Needs Form
- 2 [CalRecycle Weights and Volumes](#)
- 3 CalEEMod User's Guide, Appendix C

Currently assumed construction will use concrete for paving. However, modeling and calculations conservative account for asphalt paving and associated emissions if asphalt is to be used for paving.

AQ.2: CalEEMod Construction Air Quality Modeling

Tehapachi - Pump Station Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Tehapachi - Pump Station
Construction Start Date	3/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	5.00
Precipitation (days)	24.6
Location	35.125250301321174, -118.41773373756924
County	Kern-Mojave Desert
City	Tehachapi
Air District	Kern County APCD
Air Basin	Mojave Desert
TAZ	2913
EDFZ	9
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.25

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Non-Asphalt Surfaces	2.50	1000sqft	0.06	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.	2.15	1.81	13.5	16.9	0.04	0.54	0.46	0.80	0.50	0.12	0.56	—	4,923	4,923	0.20	0.16	2.82	4,946
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.24	1.05	8.63	11.3	0.03	0.33	0.46	0.79	0.30	0.12	0.42	—	3,436	3,436	0.11	0.16	0.07	3,487
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.51	0.43	3.28	4.10	0.01	0.13	0.10	0.22	0.12	0.02	0.14	—	1,218	1,218	0.05	0.03	0.22	1,227
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.09	0.08	0.60	0.75	< 0.005	0.02	0.02	0.04	0.02	< 0.005	0.03	—	202	202	0.01	< 0.005	0.04	203

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	2.15	1.81	13.5	16.9	0.04	0.54	0.46	0.80	0.50	0.12	0.56	—	4,923	4,923	0.20	0.16	2.82	4,946
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.24	1.05	8.63	11.3	0.03	0.33	0.46	0.79	0.30	0.12	0.42	—	3,436	3,436	0.11	0.16	0.07	3,487
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.51	0.43	3.28	4.10	0.01	0.13	0.10	0.22	0.12	0.02	0.14	—	1,218	1,218	0.05	0.03	0.22	1,227
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.09	0.08	0.60	0.75	< 0.005	0.02	0.02	0.04	0.02	< 0.005	0.03	—	202	202	0.01	< 0.005	0.04	203

3. Construction Emissions Details

3.1. Site Preparation (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.90	0.76	5.77	7.79	0.02	0.21	—	0.21	0.19	—	0.19	—	2,055	2,055	0.08	0.02	—	2,062
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.1	28.1	< 0.005	< 0.005	—	28.2
Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.66	4.66	< 0.005	< 0.005	—	4.68
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	0.10	0.09	0.10	1.14	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	237	237	0.01	0.01	0.03	240
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.84	0.18	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	687	687	< 0.005	0.11	0.04	719
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.35	3.35	< 0.005	< 0.005	0.01	3.39
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.40	9.40	< 0.005	< 0.005	0.01	9.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.55	0.55	< 0.005	< 0.005	< 0.005	0.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.56	1.56	< 0.005	< 0.005	< 0.005	1.63

3.3. Grading/Excavation (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	1.12	0.94	7.53	9.93	0.02	0.31	—	0.31	0.29	—	0.29	—	2,375	2,375	0.10	0.02	—	2,383
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	7.53	9.93	0.02	0.31	—	0.31	0.29	—	0.29	—	2,375	2,375	0.10	0.02	—	2,383
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.66	0.87	< 0.005	0.03	—	0.03	0.03	—	0.03	—	208	208	0.01	< 0.005	—	209
Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	34.5	34.5	< 0.005	< 0.005	—	34.6
Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.09	1.62	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	267	267	0.01	0.01	1.05	271
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	0.02	0.02	0.96	0.21	0.01	0.02	0.22	0.23	0.02	0.06	0.08	—	823	823	< 0.005	0.13	1.76	864
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.10	1.14	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	237	237	0.01	0.01	0.03	240
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	0.02	0.02	1.01	0.21	0.01	0.02	0.22	0.23	0.02	0.06	0.08	—	824	824	< 0.005	0.13	0.05	863

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.4	21.4	< 0.005	< 0.005	0.04	21.7
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	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	72.2	72.2	< 0.005	0.01	0.07	75.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.55	3.55	< 0.005	< 0.005	0.01	3.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.01	12.5

3.5. Building Construction - Installation (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	2.02	1.70	13.3	15.2	0.04	0.54	—	0.54	0.50	—	0.50	—	4,590	4,590	0.19	0.04	—	4,606
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.34	2.67	0.01	0.09	—	0.09	0.09	—	0.09	—	805	805	0.03	0.01	—	808
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.06	0.05	0.43	0.49	< 0.005	0.02	—	0.02	0.02	—	0.02	—	133	133	0.01	< 0.005	—	134
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.09	1.62	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	267	267	0.01	0.01	1.05	271
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	65.8	65.8	< 0.005	0.01	0.18	68.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.8	42.8	< 0.005	< 0.005	0.08	43.5
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.01	12.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.09	7.09	< 0.005	< 0.005	0.01	7.19
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.91	1.91	< 0.005	< 0.005	< 0.005	1.99
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. 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	0.86	0.72	6.34	8.16	0.01	0.27	—	0.27	0.25	—	0.25	—	1,264	1,264	0.05	0.01	—	1,268
Paving	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.4	10.4	< 0.005	< 0.005	—	10.4
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.72	1.72	< 0.005	< 0.005	—	1.73
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	0.12	0.10	0.09	1.62	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	267	267	0.01	0.01	1.05	271
Vendor	0.01	0.01	0.29	0.11	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	263	263	< 0.005	0.04	0.72	275
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.01	2.01	< 0.005	< 0.005	< 0.005	2.04
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.16	2.16	< 0.005	< 0.005	< 0.005	2.26
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	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.37
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. Testing/Start Up (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	0.05	0.05	0.81	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	133	133	0.01	< 0.005	0.53	135
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.67	1.67	< 0.005	< 0.005	< 0.005	1.70
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	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	3/1/2025	3/7/2025	5.00	5.00	—
Grading/Excavation	Grading	3/8/2025	4/22/2025	5.00	32.0	—
Building Construction - Installation	Building Construction	4/23/2025	7/21/2025	5.00	64.0	—
Paving	Paving	7/22/2025	7/24/2025	5.00	3.00	—
Testing/Start Up	Architectural Coating	7/25/2025	7/31/2025	5.00	5.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Site Preparation	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Site Preparation	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading/Excavation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading/Excavation	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Grading/Excavation	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38

Grading/Excavation	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Building Construction - Installation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction - Installation	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Building Construction - Installation	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
Building Construction - Installation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction - Installation	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	8.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	20.0	17.3	LDA,LDT1,LDT2
Site Preparation	Vendor	0.00	10.6	HHDT,MHDT
Site Preparation	Hauling	10.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading/Excavation	—	—	—	—
Grading/Excavation	Worker	20.0	17.3	LDA,LDT1,LDT2
Grading/Excavation	Vendor	0.00	10.6	HHDT,MHDT

Grading/Excavation	Hauling	12.0	20.0	HHDT
Grading/Excavation	Onsite truck	—	—	HHDT
Building Construction - Installation	—	—	—	—
Building Construction - Installation	Worker	20.0	17.3	LDA,LDT1,LDT2
Building Construction - Installation	Vendor	2.00	10.6	HHDT,MHDT
Building Construction - Installation	Hauling	0.00	20.0	HHDT
Building Construction - Installation	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	17.3	LDA,LDT1,LDT2
Paving	Vendor	8.00	10.6	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Testing/Start Up	—	—	—	—
Testing/Start Up	Worker	10.0	17.3	LDA,LDT1,LDT2
Testing/Start Up	Vendor	0.00	10.6	HHDT,MHDT
Testing/Start Up	Hauling	0.00	20.0	HHDT
Testing/Start Up	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

5.5. Architectural Coatings

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

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	231	0.00	0.00	—
Grading/Excavation	—	1,852	0.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.06

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Non-Asphalt Surfaces	0.06	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

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

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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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	31.0	annual days of extreme heat
Extreme Precipitation	2.50	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	10.9	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	N/A	N/A	N/A	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	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	0	0	0	N/A
Air Quality Degradation	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A
Extreme Precipitation	1	1	1	2
Sea Level Rise	N/A	N/A	N/A	N/A
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	1	1	1	2

Air Quality Degradation	N/A	N/A	N/A	N/A
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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	88.7
AQ-PM	4.94
AQ-DPM	46.3
Drinking Water	49.7
Lead Risk Housing	60.2
Pesticides	49.9
Toxic Releases	19.7
Traffic	15.5
Effect Indicators	—
CleanUp Sites	37.6
Groundwater	22.1
Haz Waste Facilities/Generators	81.5
Impaired Water Bodies	0.00
Solid Waste	89.0

Sensitive Population	—
Asthma	71.7
Cardio-vascular	87.0
Low Birth Weights	72.1
Socioeconomic Factor Indicators	—
Education	54.4
Housing	42.8
Linguistic	25.6
Poverty	70.1
Unemployment	77.1

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	36.72526626
Employed	43.57756961
Median HI	22.94366739
Education	—
Bachelor's or higher	28.11497498
High school enrollment	100
Preschool enrollment	4.991659181
Transportation	—
Auto Access	40.33106634
Active commuting	29.02604902
Social	—
2-parent households	79.09662518

Voting	68.71551392
Neighborhood	—
Alcohol availability	63.35172591
Park access	24.56050302
Retail density	22.85384319
Supermarket access	23.20030797
Tree canopy	56.53791864
Housing	—
Homeownership	53.13743103
Housing habitability	64.05748749
Low-inc homeowner severe housing cost burden	77.92891056
Low-inc renter severe housing cost burden	49.09534197
Uncrowded housing	43.98819453
Health Outcomes	—
Insured adults	55.13922751
Arthritis	0.0
Asthma ER Admissions	43.2
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	27.1
Cognitively Disabled	38.1
Physically Disabled	18.7
Heart Attack ER Admissions	2.6

Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	58.9
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	0.0
SLR Inundation Area	0.0
Children	19.0
Elderly	36.8
English Speaking	60.4
Foreign-born	11.7
Outdoor Workers	25.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	69.1
Traffic Density	14.4
Traffic Access	0.0
Other Indices	—
Hardship	65.3
Other Decision Support	—
2016 Voting	59.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	69.0
Healthy Places Index Score for Project Location (b)	38.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See project assumptions
Construction: Off-Road Equipment	See project assumptions
Construction: Architectural Coatings	No architectural coating. phase used as a place holder for start up/testing
Construction: Trips and VMT	See project assumptions
Construction: Paving	See project assumptions

Tehapachi - Pipeline Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Tehapachi - Pipeline
Construction Start Date	3/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	5.00
Precipitation (days)	24.6
Location	35.125250301321174, -118.41773373756924
County	Kern-Mojave Desert
City	Tehachapi
Air District	Kern County APCD
Air Basin	Mojave Desert
TAZ	2913
EDFZ	9
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.25

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Non-Asphalt Surfaces	10.6	1000sqft	0.24	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.	2.15	1.81	13.5	16.9	0.04	0.54	0.49	0.80	0.50	0.13	0.56	—	4,923	4,923	0.20	0.15	3.59	4,946
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.49	1.25	9.59	13.2	0.03	0.37	0.28	0.65	0.34	0.07	0.41	—	3,028	3,028	0.12	0.05	0.03	3,047
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.42	0.35	2.67	3.38	0.01	0.11	0.06	0.17	0.10	0.01	0.11	—	936	936	0.04	0.01	0.13	941
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.06	0.49	0.62	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	155	155	0.01	< 0.005	0.02	156

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	2.15	1.81	13.5	16.9	0.04	0.54	0.49	0.80	0.50	0.13	0.56	—	4,923	4,923	0.20	0.15	3.59	4,946
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.49	1.25	9.59	13.2	0.03	0.37	0.28	0.65	0.34	0.07	0.41	—	3,028	3,028	0.12	0.05	0.03	3,047
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.42	0.35	2.67	3.38	0.01	0.11	0.06	0.17	0.10	0.01	0.11	—	936	936	0.04	0.01	0.13	941
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.08	0.06	0.49	0.62	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	155	155	0.01	< 0.005	0.02	156

3. Construction Emissions Details

3.1. Trenching/Excavation/Shoring (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	1.38	1.16	9.32	12.0	0.03	0.36	—	0.36	0.34	—	0.34	—	2,654	2,654	0.11	0.02	—	2,663
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.38	1.16	9.32	12.0	0.03	0.36	—	0.36	0.34	—	0.34	—	2,654	2,654	0.11	0.02	—	2,663
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.66	0.85	< 0.005	0.03	—	0.03	0.02	—	0.02	—	189	189	0.01	< 0.005	—	190
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.3	31.3	< 0.005	< 0.005	—	31.4
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.09	1.62	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	267	267	0.01	0.01	1.05	271
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	0.16	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	137	137	< 0.005	0.02	0.29	144

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.10	1.14	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	237	237	0.01	0.01	0.03	240
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	0.17	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	137	137	< 0.005	0.02	0.01	144
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.4	17.4	< 0.005	< 0.005	0.03	17.7
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.78	9.78	< 0.005	< 0.005	0.01	10.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.88	2.88	< 0.005	< 0.005	0.01	2.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.62	1.62	< 0.005	< 0.005	< 0.005	1.70

3.3. Building Construction - Pipeline Installation (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	2.02	1.70	13.3	15.2	0.04	0.54	—	0.54	0.50	—	0.50	—	4,590	4,590	0.19	0.04	—	4,606
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	1.90	2.17	0.01	0.08	—	0.08	0.07	—	0.07	—	654	654	0.03	0.01	—	656
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	108	108	< 0.005	< 0.005	—	109
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.09	1.62	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	267	267	0.01	0.01	1.05	271
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	65.8	65.8	< 0.005	0.01	0.18	68.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.18	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.8	34.8	< 0.005	< 0.005	0.06	35.3
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.37	9.37	< 0.005	< 0.005	0.01	9.78
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	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.76	5.76	< 0.005	< 0.005	0.01	5.85
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.62
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. Site Restoration/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	0.86	0.72	6.34	8.16	0.01	0.27	—	0.27	0.25	—	0.25	—	1,264	1,264	0.05	0.01	—	1,268
Paving	0.21	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.4	10.4	< 0.005	< 0.005	—	10.4
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.72	1.72	< 0.005	< 0.005	—	1.73
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	0.12	0.10	0.09	1.62	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	267	267	0.01	0.01	1.05	271
Vendor	0.04	0.03	1.01	0.40	0.01	0.01	0.25	0.26	0.01	0.07	0.08	—	921	921	< 0.005	0.13	2.54	962
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.01	2.01	< 0.005	< 0.005	< 0.005	2.04
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.57	7.57	< 0.005	< 0.005	0.01	7.90
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	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.31
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Testing/Start up (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.05	0.05	0.81	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	133	133	0.01	< 0.005	0.53	135
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.67	1.67	< 0.005	< 0.005	< 0.005	1.70
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	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Trenching/Excavation/Shoring	Grading	3/1/2025	4/7/2025	5.00	26.0	—
Building Construction - Pipeline Installation	Building Construction	4/8/2025	6/18/2025	5.00	52.0	—
Site Restoration/Paving	Paving	6/19/2025	6/23/2025	5.00	3.00	—
Testing/Start up	Architectural Coating	6/24/2025	6/30/2025	5.00	5.00	—

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
Trenching/Excavation/Shoring	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Trenching/Excavation/Shoring	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Trenching/Excavation/Shoring	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Trenching/Excavation/Shoring	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Trenching/Excavation/Shoring	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38

Trenching/Excavation/S	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Building Construction - Pipeline Installation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction - Pipeline Installation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction - Pipeline Installation	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
Building Construction - Pipeline Installation	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Building Construction - Pipeline Installation	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Site Restoration/Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Site Restoration/Paving	Cement and Mortar Mixers	Diesel	Average	4.00	8.00	10.0	0.56
Site Restoration/Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Site Restoration/Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Trenching/Excavation/Shoring	—	—	—	—
Trenching/Excavation/Shoring	Worker	20.0	17.3	LDA,LDT1,LDT2
Trenching/Excavation/Shoring	Vendor	0.00	10.6	HHDT,MHDT
Trenching/Excavation/Shoring	Hauling	2.00	20.0	HHDT
Trenching/Excavation/Shoring	Onsite truck	—	—	HHDT
Building Construction - Pipeline Installation	—	—	—	—

Building Construction - Pipeline Installation	Worker	20.0	17.3	LDA,LDT1,LDT2
Building Construction - Pipeline Installation	Vendor	2.00	10.6	HHDT,MHDT
Building Construction - Pipeline Installation	Hauling	0.00	20.0	HHDT
Building Construction - Pipeline Installation	Onsite truck	—	—	HHDT
Site Restoration/Paving	—	—	—	—
Site Restoration/Paving	Worker	20.0	17.3	LDA,LDT1,LDT2
Site Restoration/Paving	Vendor	28.0	10.6	HHDT,MHDT
Site Restoration/Paving	Hauling	0.00	20.0	HHDT
Site Restoration/Paving	Onsite truck	—	—	HHDT
Testing/Start up	—	—	—	—
Testing/Start up	Worker	10.0	17.3	LDA,LDT1,LDT2
Testing/Start up	Vendor	0.00	10.6	HHDT,MHDT
Testing/Start up	Hauling	0.00	20.0	HHDT
Testing/Start up	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

5.5. Architectural Coatings

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

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Trenching/Excavation/Shoring	—	250	0.00	0.00	—
Site Restoration/Paving	0.00	0.00	0.00	0.00	0.24

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Non-Asphalt Surfaces	0.24	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

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

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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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	31.0	annual days of extreme heat
Extreme Precipitation	2.50	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	10.9	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	N/A	N/A	N/A	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	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	0	0	0	N/A
Air Quality Degradation	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A
Extreme Precipitation	1	1	1	2
Sea Level Rise	N/A	N/A	N/A	N/A
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	1	1	1	2
Air Quality Degradation	N/A	N/A	N/A	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 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	88.7
AQ-PM	4.94
AQ-DPM	46.3
Drinking Water	49.7
Lead Risk Housing	60.2
Pesticides	49.9
Toxic Releases	19.7
Traffic	15.5
Effect Indicators	—
CleanUp Sites	37.6
Groundwater	22.1
Haz Waste Facilities/Generators	81.5
Impaired Water Bodies	0.00
Solid Waste	89.0
Sensitive Population	—
Asthma	71.7
Cardio-vascular	87.0

Low Birth Weights	72.1
Socioeconomic Factor Indicators	—
Education	54.4
Housing	42.8
Linguistic	25.6
Poverty	70.1
Unemployment	77.1

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	36.72526626
Employed	43.57756961
Median HI	22.94366739
Education	—
Bachelor's or higher	28.11497498
High school enrollment	100
Preschool enrollment	4.991659181
Transportation	—
Auto Access	40.33106634
Active commuting	29.02604902
Social	—
2-parent households	79.09662518
Voting	68.71551392
Neighborhood	—
Alcohol availability	63.35172591

Park access	24.56050302
Retail density	22.85384319
Supermarket access	23.20030797
Tree canopy	56.53791864
Housing	—
Homeownership	53.13743103
Housing habitability	64.05748749
Low-inc homeowner severe housing cost burden	77.92891056
Low-inc renter severe housing cost burden	49.09534197
Uncrowded housing	43.98819453
Health Outcomes	—
Insured adults	55.13922751
Arthritis	0.0
Asthma ER Admissions	43.2
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	27.1
Cognitively Disabled	38.1
Physically Disabled	18.7
Heart Attack ER Admissions	2.6
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0

Pedestrian Injuries	58.9
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	0.0
SLR Inundation Area	0.0
Children	19.0
Elderly	36.8
English Speaking	60.4
Foreign-born	11.7
Outdoor Workers	25.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	69.1
Traffic Density	14.4
Traffic Access	0.0
Other Indices	—
Hardship	65.3
Other Decision Support	—
2016 Voting	59.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	69.0

Healthy Places Index Score for Project Location (b)	38.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See project assumptions
Construction: Off-Road Equipment	See project assumptions
Construction: Architectural Coatings	No architectural coatings (place holder for testing/start up)
Construction: Dust From Material Movement	See project assumptions
Construction: Trips and VMT	See project assumptions
Construction: Paving	See project assumption

Appendix BIO

**Biological Resources Technical
Memorandum for the City of
Tehachapi Reclaimed Water
Project**



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memorandum

date September 24, 2024
to City of Tehachapi
from Amanda French, Biologist; Robbie Sweet, Senior Biologist – Environmental Science Associates
subject Biological Resources Memorandum for the City of Tehachapi Reclaimed Water Application Project

Project Background and Understanding

Environmental Science Associates (ESA) has prepared a Biological Resources Memorandum analyzing impacts associated with the proposed Reclaimed Water Application Project (project), which would change the location of application of the secondary treated effluent produced at the Tehachapi Waste Water Treatment Plant (WWTP) from the agricultural fields near the Tehachapi Municipal Airport to a new location south of the Borrow Pit. The project would result in construction of a pump station at the Borrow Pit, an approximate 1-mile pipeline, and a turnout to the agricultural parcel bounded by Tuft Road, Harris Street, Steuber Road, and Highline Road (**Figure 1, Project Components and Biological Study Area**).

In 2021, ESA prepared a Biological Resources Technical Report (BRTR) analyzing impacts associated with the City of Tehachapi Groundwater Sustainability Project (GSP) (ESA 2021; **Attachment A**). The project includes a subset of the infrastructure analyzed in the 2021 BRTR and is therefore used herein as a basis for the analysis. The proposed pump station is assumed to be sited in the same location within the existing Borrow Pit proposed in the 2021 GSP. The proposed 12-inch pipeline is planned to follow the route proposed in the 2021 GSP but would terminate at the southwest intersection of Steuber Road and Highline Road where there would be a new turnout to the agricultural parcel bounded by Tuft Road, Harris Street, Steuber Road, and Highline Road. The proposed 12-inch pipeline is planned to be constructed within the existing roadway right-of-way. No work is planned to occur within the existing WWTP or within Blackburn Dam. Although the proposed project's pipeline, pump station, and turnout are all located within the biological study area for the 2021 GSP project, ESA conducted an updated existing literature and database review and biological resources reconnaissance in July 2024. This memorandum documents updates from the literature and database review and biological resources reconnaissance.

Methodology

The 2024 biological study area (BSA) comprises the existing Borrow Pit, including the proposed pump station, and the proposed 12-inch pipeline along with a surrounding 500-foot buffer. Prior to conducting the 2024 reconnaissance, ESA reviewed updated California Natural Diversity Data Base (CNDDB) (CDFW 2024) and California Native Plant Society (CNPS) Online Inventory (CNPS 2024) information regarding the present biological conditions of the BSA. An updated general biological reconnaissance survey was conducted within the BSA by ESA biologist Megan Minter on July 1, 2024. All natural communities and land cover types were



Biological Resources Memorandum for the City of Tehachapi Reclaimed Water Application Project
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characterized and delineated on ArcGIS Field Maps during the field survey. The nomenclature used to describe the vegetation is based on A Manual of California Vegetation, Second Edition (Sawyer 2009), or characterized based on species dominance or other descriptor when not recognized in the Manual.

Existing Conditions

The updated literature and database review and biological resources reconnaissance resulted in the following changes to the natural communities and land cover type acreages, below. No additional changes to existing conditions were identified.

Updated Natural Communities and Land Cover Types

Updated natural communities and land cover types located in the BSA are depicted on **Figure 2, Natural Communities and Land Cover Types**, and described in detail in Section 4.3 of the BRTR (Attachment A). The natural community and land cover acreages are listed below in **Table 1, Natural Communities and Land Cover Types within the BSA**.

TABLE 1
NATURAL COMMUNITIES AND LAND COVER TYPES WITHIN THE BSA

Natural Community/Land Cover Type	Acreage
Natural Communities	
Red Willow - Fremont Cottonwood Forest and Woodland (<i>Salix laevigata</i> - <i>Populus fremontii</i> Forest & Woodland Alliance)	4.92
Rubber Rabbitbrush Scrub (<i>Ericameria nauseosa</i> Shrubland Alliance)	7.92
Wild Oats and Annual Brome Grasslands (<i>Avena</i> spp. – <i>Bromus</i> spp. Herbaceous Semi-Natural Alliance)	84.14
Open Water	8.12
Land Cover Types	
Agriculture	60.52
Developed	42.75
TOTAL	208.37



Impacts Analysis and Mitigation Measures

Issue A: Would the proposed project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Special-status wildlife species have the potential to be present in the BSA and could be impacted by the proposed project. Based on the presence of suitable habitat within the BSA, there is moderate potential for eight special-status wildlife species to forage and/or breed within the BSA: Tricolored blackbird (*Agelaius tricolor*), California legless lizard (*Anniella* spp.), golden eagle (*Aquila chrysaetos*), Crotch bumble bee (*Bombus crotchii*), California condor (*Gymnogyps californianus*), loggerhead shrike (*Lanius ludovicianus*), Tehachapi pocket mouse (*Perognathus alticola* ssp. *inexpectatus*) and coast horned lizard (*Phrynosoma blainvillii*). No additional sensitive species were identified during the 2024 field reconnaissance or updated database review that were not identified in the 2021 BRTR. It should be noted that the California condor and golden eagle may forage within the BSA; however, nesting sites (i.e., large, sheer cliffs) are not available within the BSA and any impacts to foraging would be minimal and considered less than significant. Crotch bumblebee was identified in the 2021 BRTR and mitigation was proposed to reduce potential impacts to the species; however, formal survey methodology has since been developed by the CDFW (CDFW 2023), resulting in the need to revise the mitigation for the species (see BIO-1, below). The project has the potential to impact sensitive species; however, mitigation measures shall be implemented to reduce impacts to a less than significant level.

Mitigation measures **BIO-1, BIO-2 and BIO-3** will require focused surveys to determine presence/absence of Crotch's bumble bee, Tehachapi pocket mouse and tri-colored blackbird, respectively, and measures to ensure that impacts to individuals and occupied habitat are avoided and/or reduced to a less than significant level. Mitigation measure **BIO-4** will require general pre-construction wildlife clearance surveys to determine presence/absence of California legless lizard and coast horned lizard and ensure that impacts to individuals are avoided and/or reduced to a less than significant level. Mitigation measure **BIO-5** will require nesting bird surveys to identify the location of active nests and ensure that impacts to loggerhead shrike, tricolored blackbird and other nesting birds and raptors are reduced to a less than significant level.

BIO-1: Impacts to Crotch Bumble Bee. Project activities could negatively impact Crotch bumble bee foraging and/or nesting through the direct removal of habitat and/or disruption of breeding/nesting activities at the Borrow Pit. A qualified entomologist familiar with the species' behavior and life history shall conduct surveys to determine presence/absence of the Crotch bumble bee within the year prior to vegetation removal and/or grading in areas that provide suitable habitat (i.e., rubber rabbitbrush scrub and grassland communities) for this species. A minimum of three surveys, ideally 2-4 weeks apart, should also be conducted during peak flying season when the species is most likely to be detected above ground, between March 1 to September 1 and during peak bloom of nectaring resources (CDFW 2023). At minimum, a survey report should provide the following:

- A description and map of the survey area, focusing on areas that could provide suitable habitat for Crotch bumble bee.



Biological Resources Memorandum for the City of Tehachapi Reclaimed Water Application Project

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- Field survey conditions that should include name(s) of qualified entomologist(s) and brief qualifications; date and time of survey; survey duration; general weather conditions; survey goals, and species searched.
- Map(s) showing the location of nests/colonies.
- A description of physical (e.g., soil, moisture, slope) and biological (e.g., plant composition) conditions at each nest/colony location and/or where suitable habitat is present.

If Crotch bumble bee is detected, the qualified entomologist should identify the location of all nests within and adjacent to the project site. A 15-meter (50-foot) no disturbance buffer zone should be established around any identified nest(s) to reduce the risk of disturbance or accidental take. A qualified entomologist should expand the buffer zone as necessary to prevent disturbance or take.

If Crotch bumble bee is detected and impacts to Crotch bumble bee cannot be feasibly avoided, consultation with the CDFW shall be initiated to obtain take authorization (pursuant to FGC, § 2080 et seq).

Any floral resource associated with Crotch bumble bee that will be removed or damaged by the project should be replaced at no less than 1:1, as determined in consultation with CDFW.

BIO-2: Impacts to Tehachapi Pocket Mouse and Occupied Habitat. Prior to commencement of project activities at the proposed 12-inch pipeline area, a qualified biologist shall conduct a live-trapping survey for the Tehachapi pocket mouse, within and immediately adjacent to project impact areas, in accordance with CDFW standard live-trapping protocols.

If Tehachapi pocket mouse are detected during the live-trapping, impacts to occupied habitat should be avoided wherever possible. If construction activities cannot avoid occupied habitat, a qualified biologist shall delineate the portion of the work area adjacent to the occupied habitat with exclusionary fencing and trap and relocate any individuals out of the work area within three days prior to the commencement of work activities. CDFW shall be consulted on the relocation methods prior to relocation efforts, as well as any additional avoidance and minimization measures to protect individuals.

BIO-3: Impacts to Tricolored Blackbird. Prior to implementation of the proposed project, a qualified biologist shall conduct focused surveys during the nesting season for tricolored blackbird at the Borrow Pit to determine if this species uses the BSA for nesting. If tricolored blackbirds are not detected, no further action is necessary.

If tricolored blackbirds are observed nesting within or adjacent to the borrow pit, construction activities within 300 feet of suitable nesting habitat shall be avoided to the extent feasible and Mitigation Measure BIO-5 shall be implemented to prevent impacts to nesting blackbirds. If occupied nesting habitat for tricolored blackbird is unavoidable, suitable nesting habitat shall be replaced at minimum ratio of 2:1 at a suitable location approved by CDFW. The replacement habitat shall be suitable to support tricolored blackbird breeding habitat with similar nesting and foraging habitat functions as is provided by the existing habitat.

BIO-4: Pre-Construction Wildlife Clearance Surveys. Prior to any ground disturbance, a qualified biologist shall conduct a pre-construction wildlife clearance survey throughout the project sites, including



Biological Resources Memorandum for the City of Tehachapi Reclaimed Water Application Project
Page 5

an approximate 100-foot buffer for California legless lizard and coast horned lizard. If California legless lizard or coast horned lizard are observed within 100 feet of the project work areas during pre-construction clearance surveys, a qualified biologist shall relocate the individuals to suitable habitat located a sufficient distance away from the impact areas to ensure that construction-related impacts are avoided.

BIO-5: Impacts to Nesting Avian Species and Active Nests. If the nesting avian season cannot be avoided and construction or vegetation removal is initiated between March 1 – September 15 (or January 1 to August 1 for raptors), the following measures would reduce potential impacts to nesting and migratory birds and raptors to less than significant levels:

- Within 10 days of site clearing, a qualified biologist shall conduct a preconstruction, migratory bird and raptor nesting survey throughout the BSA. The biologist must be qualified to determine the status and stage of nesting by migratory birds and all locally breeding raptor species without causing intrusive disturbance. The preconstruction survey shall include a 300-foot buffer for passerine species and 500-foot for raptors.
- If an active nest is confirmed by the biologist, no construction activities shall take place within 300 feet of the nesting site for migratory birds and 500 feet of the nesting site for raptors. The buffer zones around any nest within which project-related construction activities may be reduced as deemed acceptable by a qualified biologist. Construction activities may resume once the breeding season ends (March 1 – September 15), or the nest has either failed or the birds have fledged.

Issue B: Would the proposed project 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 US Fish and Wildlife Service?

The 2021 BRTR identified a total of 2.24 acres of red willow-Fremont cottonwood woodland and forest, a CDFW sensitive community, and determined that 0.02 acre of red-willow Fremont cottonwood woodland and forest habitat, would be impacted by GSP project activities (0.01 acre within the WWTP and 0.01 acre along the proposed 12-inch pipeline). During the 2024 field reconnaissance, approximately 4.92 acres of red willow-Fremont cottonwood woodland and forest habitat, was identified within the BSA surrounding the existing Borrow Pit. This sensitive natural community maintains the same species dominance and description provided in the 2021 BRTR. However, the direct impact to this sensitive natural community as a result of the current project is not expected; therefore mitigation proposed in the 2021 BRTR (i.e., BIO-5) is no longer applicable. The proposed project would be required to comply with construction-related BMPs within a Stormwater Pollution Prevention Plan (SWPPP) by a Qualified SWPPP Developer, which would include erosion control and prevention of fuel spills/leaks into the Borrow Pit. Impacts to CDFW sensitive communities would be considered less than significant and no mitigation would be required.

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



Biological Resources Memorandum for the City of Tehachapi Reclaimed Water Application Project
Page 6

A formal aquatic resources delineation was not completed during the 2024 field reconnaissance; however, the open water and riparian vegetation within the borrow pit are likely jurisdictional with the CDFW, Regional Water Quality Control Board and the United States Army Corps of Engineers. Direct removal of these resources is not expected during the proposed project activities. The proposed project would be required to comply with construction-related BMPs within a SWPPP by a Qualified SWPPP Developer, which would include erosion control and prevention of fuel spills/leaks into the Borrow Pit. Impacts to state or federally protected wetlands would be considered less than significant.

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

Although the BSA lies within the Pacific Flyway and is adjacent to Tehachapi Connection, which is an important wildlife corridor linking the southern Coast and Transverse Ranges in the southwest to the Sierra Nevada Mountain Range in the north, construction of the proposed project is not anticipated to significantly restrict the movement of wildlife because the BSA would still remain accessible and traversable to any wildlife that may be foraging or moving through the area during construction and operational activities. No additional migratory species or potential wildlife corridors were identified during the 2024 field reconnaissance or updated literature and database review. Migratory nesting birds have the potential to use habitat within the BSA for foraging and breeding resulting in a potentially significant impact. As a result, Mitigation Measure BIO-4 (listed above) would be required to reduce impacts to nesting birds to a less than significant level.

Issue E: Would the proposed project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project is within the jurisdiction of the City of Tehachapi General Plan and Kern County General Plan which require protection and/or restoration of identified resources and areas. No additional local policies or ordinances were identified during the updated literature review. Construction associated with the project could conflict with established plans and policies, resulting in a potentially significant impact; however, implementation of Mitigation Measures BIO-1 through BIO-5 (listed above) would reduce the impact to a less than significant level.

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

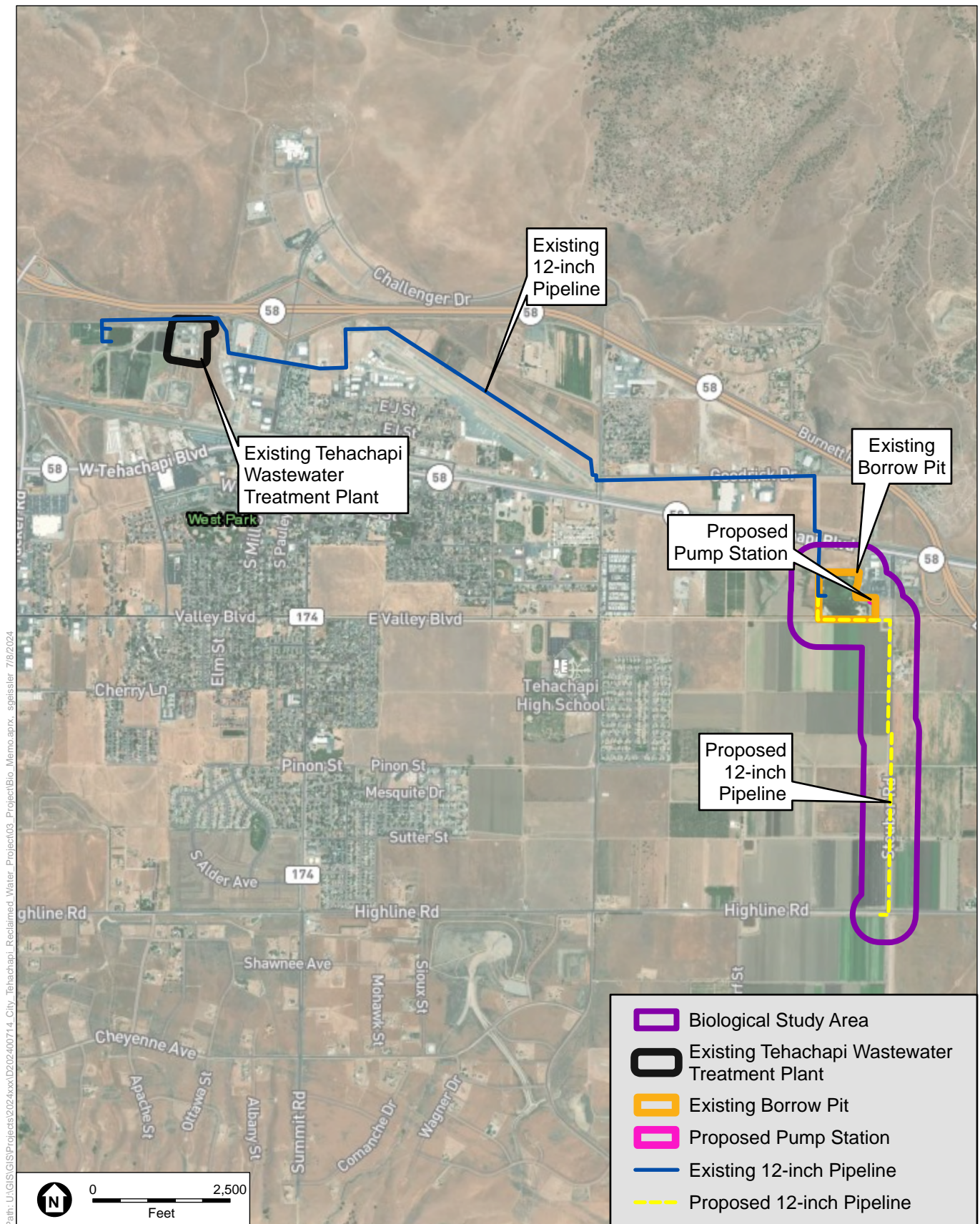
No habitat conservation plans or natural community conservation plans are applicable to the BSA. As a result, no conflicts with the provisions of an adopted HCP would occur as a result of the proposed project and no impacts would occur.



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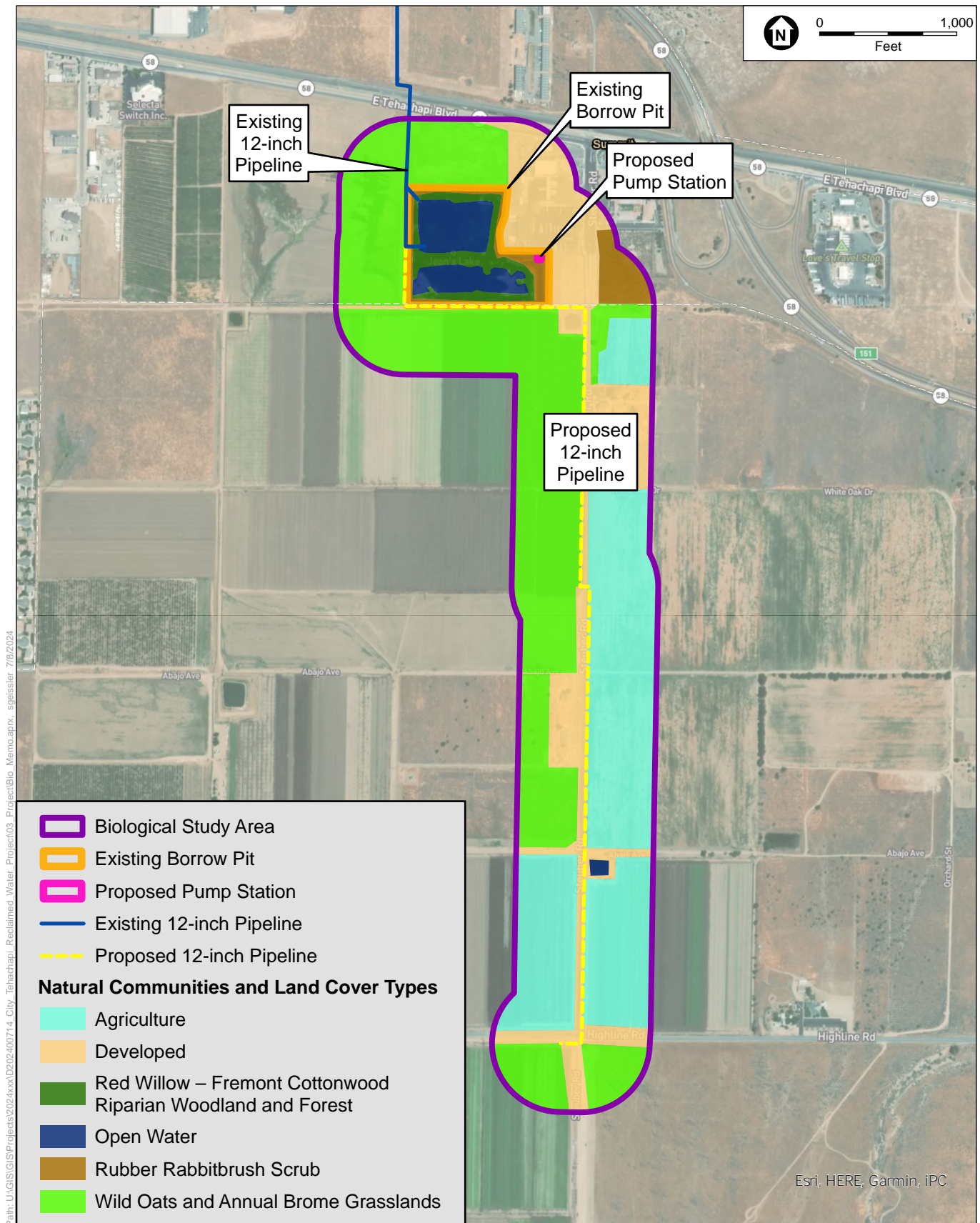
Figures



SOURCE: Mapbox, 2024; ESA, 2024

Tehachapi Reclaimed Water Project

Figure 1
Project Components and Biological Study Area



SOURCE: Mapbox, 2024; ESA, 2024

Tehachapi Reclaimed Water Project

Figure 2
Natural Communities and Land Cover Types



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Attachment A

2021 Biological Resources Technical Report

CITY OF TEHACHAPI GROUNDWATER SUSTAINABILITY PROJECT

Biological Resources Technical Report

Prepared for
City of Tehachapi

November 2021



CITY OF TEHACHAPI GROUNDWATER SUSTAINABILITY PROJECT

Biological Resources Technical Report

Prepared for
City of Tehachapi

November 2021

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EXECUTIVE SUMMARY

The City of Tehachapi (City) is proposing to implement the Groundwater Sustainability Project (GSP; proposed project), an Indirect Potable Reuse (IPR) project to increase local water supply, maximize recycled water use, improve water quality to support higher levels of recycled water, and decrease reliance on imported water. Through a literature review, desktop GIS analysis, and field reconnaissance, this Biological Resources Technical Report (BRTR) assesses the GSP proposal to construct new facilities at the City's existing Tehachapi Wastewater Treatment Plant (WWTP) to produce tertiary-treated recycled water, construct new pump stations at the WWTP and existing Borrow Pit, construct a pipeline to convey recycled water from the WWTP to the existing Borrow Pit and Blackburn Dam, and construct new spreading grounds at Blackburn Dam to allow for recharge of the tertiary-treated recycled water into the local Tehachapi Groundwater Basin.

A background investigation of the proposed project sites (project sites) was conducted that included queries of the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants. A biological resource reconnaissance was conducted on February 4 and 5, 2021 for the proposed project to gather baseline biological resources data prior to project commencement. Results of the reconnaissance, in combination with the findings of the background investigation, were used to assess the potential for project sites to support special-status plant and wildlife species and sensitive natural communities and to investigate the potential for aquatic resources to occur on the proposed project sites. Also provided is an analysis of the potential impacts to these biological resources that may result from implementing the proposed project.

The project sites are mostly developed or disturbed; however, several vegetation communities were observed or documented during the field reconnaissance and data review. The project sites currently support 12 vegetation communities and five land cover types. Two sensitive natural communities were identified within the project sites during the reconnaissance.

The project sites currently support a diversity of common and special-status wildlife and plant species that may be impacted during construction, operations, and maintenance. Special-status wildlife species that have a moderate potential to occur on-site include Crotch bumble bee, California legless lizard, coast horned lizard, California condor, golden eagle, loggerhead shrike, tricolored blackbird, and Tehachapi pocket mouse. No special-status plant species were observed or detected and no species have a moderate potential to occur based on lack of suitable habitat on site.

The proposed project has the potential to result in adverse impacts to biological resources during project construction, operations, and maintenance. This includes the potential for significant impacts to special-status wildlife, nesting avian species, sensitive natural communities, aquatic resources, and local ordinances. Impacts were evaluated in terms of the California Environmental Quality Act (CEQA) thresholds of significance for biological resources. For those thresholds for

which the proposed project would result in significant adverse impacts, mitigation measures were proposed. Mitigation measures were designed to reduce these potentially significant impacts to less than significant. For all potential impacts, implementation of mitigation measures would reduce impacts to a level that is less than significant.

CHAPTER 1

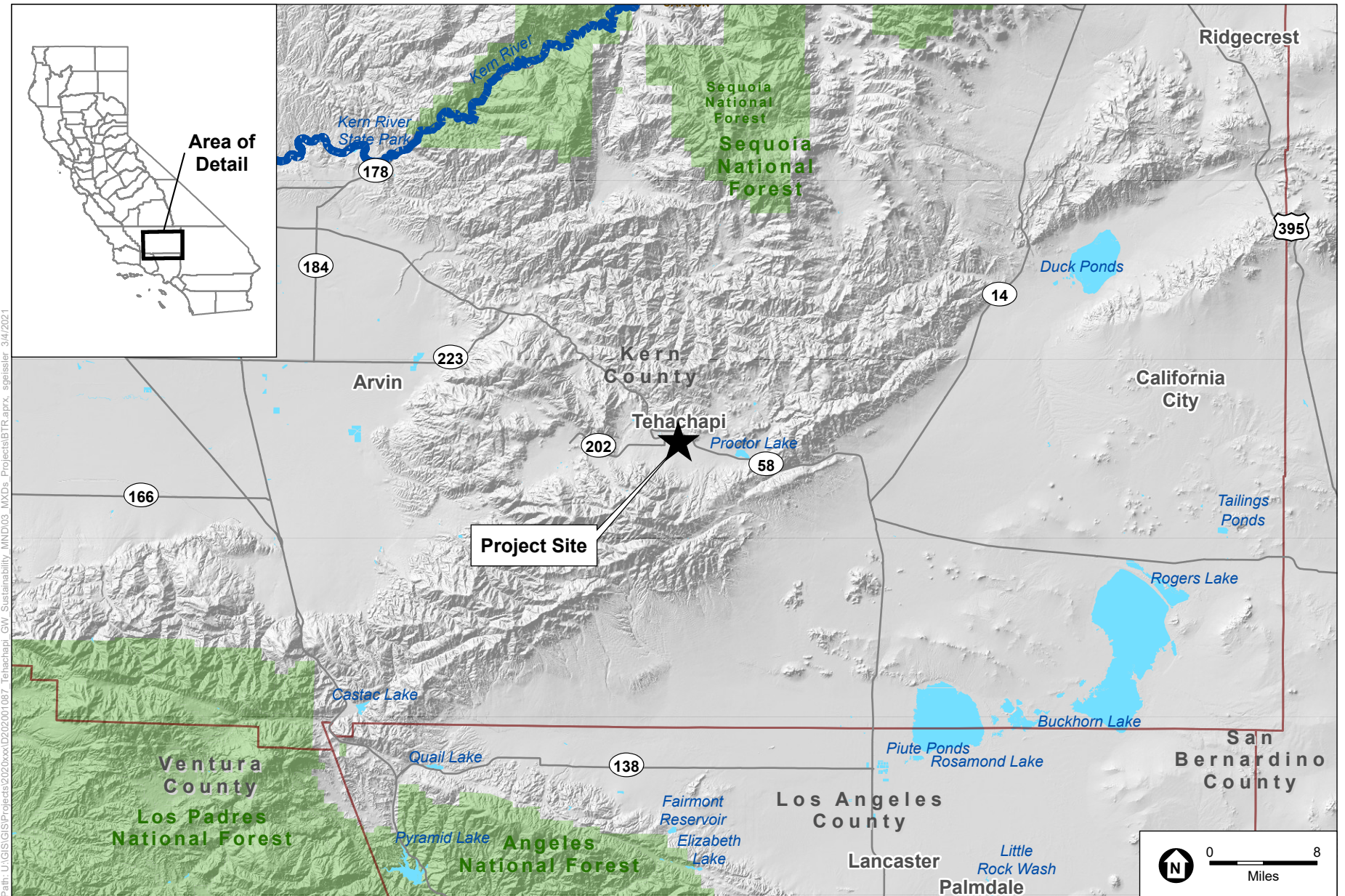
Introduction

1.1 Project Location and Background

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Groundwater Sustainability Project (GSP; proposed project), an Indirect Potable Reuse (IPR) project that would allow the City to increase local water supply, maximize recycled water use, improve water quality to support higher levels of recycled water, and decrease reliance on imported water. The GSP would construct new facilities at the City's existing Tehachapi Wastewater Treatment Plant (WWTP) to produce tertiary-treated recycled water, construct new pump stations and pipelines to convey recycled water from the WWTP to the existing Borrow Pit and Blackburn Dam, and construct new spreading grounds at Blackburn Dam to allow for recharge of the tertiary-treated recycled water into the local Tehachapi Groundwater Basin. The existing and proposed project components are collectively referred to as the "project sites." The water would be extracted at existing domestic supply wells.

The proposed project is located both within the jurisdiction of the City of Tehachapi, as well as unincorporated Kern County, located in southeastern Kern County as shown on **Figure 1**. The City is approximately 35 miles southeast of the City of Bakersfield and 50 miles northwest of the City of Lancaster. The City lies in a mountainous area between the San Joaquin Valley and the Mojave Desert, at an elevation of approximately 3,970 feet above mean sea level (amsl). It is surrounded by prominent hills and ridgelines to the north, west, and south.

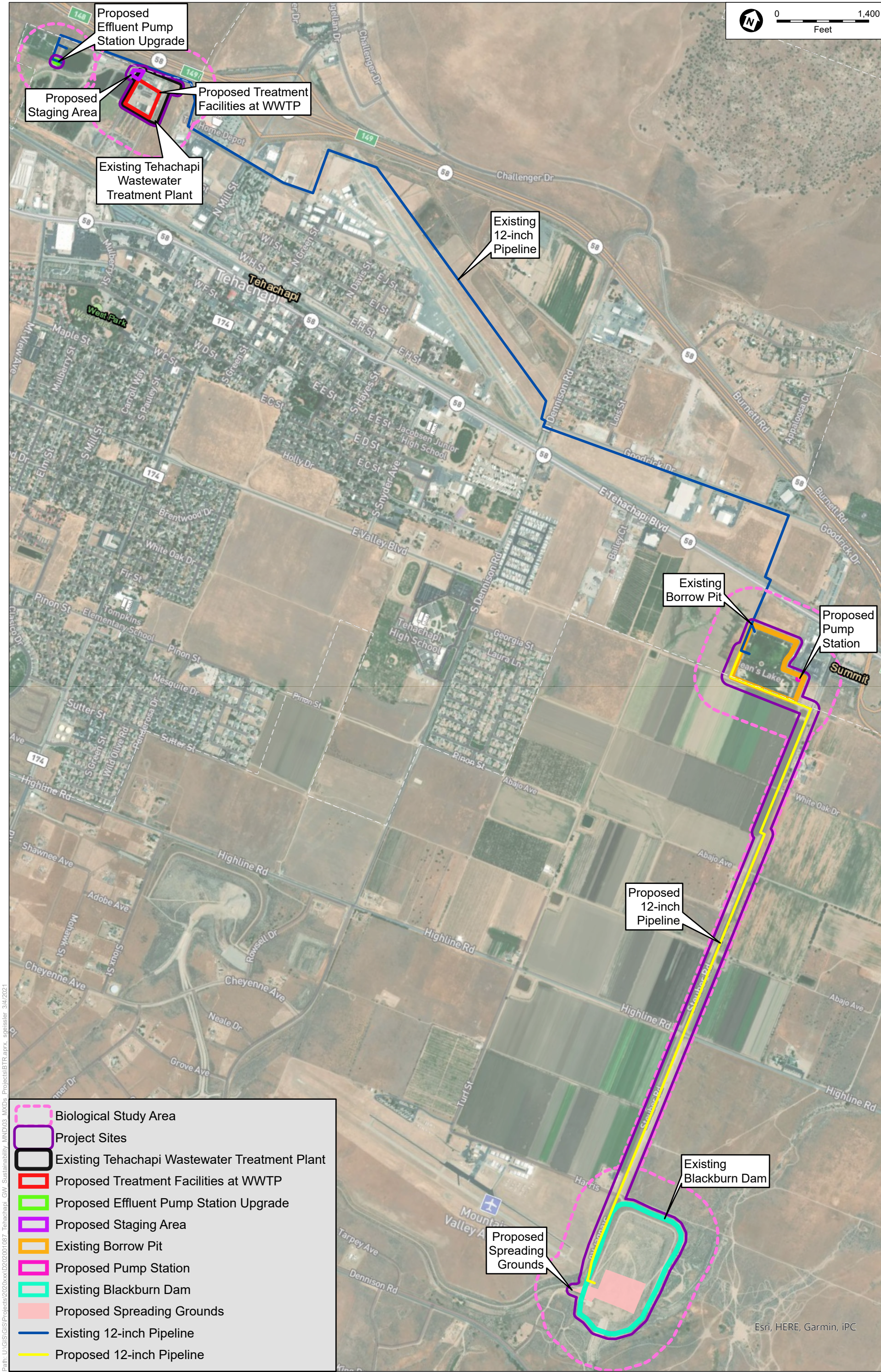
This Biological Resources Technical Report (BRTR) assesses the construction of upgraded treatment facilities at the existing WWTP, proposed new pump stations at the WWTP and existing Borrow Pit, construction of a new pipeline from the existing Borrow Pit to Blackburn Dam, and proposed new spreading grounds at Blackburn Dam. All project components of the proposed project are depicted on **Figure 2**. Figure 2 also shows the biological study area (BSA), which includes the project sites, plus a 500-foot buffer around the WWTP and staging area, proposed effluent pump station, the existing Borrow Pit and proposed pump station, and the existing Blackburn Dam, as well as a 100-foot buffer around the proposed 12-inch pipeline.



SOURCE: ESRI; National Hydrography Dataset; DWR

Tehachapi Groundwater Sustainability Project

Figure 1
Regional Location



SOURCE: Mapbox/NearMap, 2020; ESA, 2021.

Tehachapi Groundwater Sustainability Project
Figure 2
 Project Components and Biological Study Area

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1.2 Project Description

The proposed project would construct new facilities at the City's existing Tehachapi WWTP to produce tertiary-treated recycled water, construct new pump stations and pipelines to convey recycled water from the WWTP to the Blackburn Dam, and construct new spreading grounds at Blackburn Dam to allow for recharge of the tertiary-treated recycled water to the local Tehachapi Groundwater Basin. The water would be extracted at existing domestic supply wells at a future date. The main components are described below and shown on Figure 2.

As an IPR project, the GSP would be a Groundwater Recharge Reuse Project (GRRP), which would require adherence to all California Water Code Title 22 Recycled Water Regulations, and preparation and submittal of a Title 22 Engineering Report to the State Department of Drinking Water (DDW) and the Central Valley Regional Water Quality Control Board (RWQCB).

1.2.1 Treatment Facilities

The City owns and operates the existing Tehachapi WWTP which receives, treats, and disposes of wastewater by land application, either by discharging effluent to irrigate farmland (reclamation areas) north of Tehachapi Municipal Airport or by discharging effluent to storage ponds onsite at the WWTP or to the Borrow Pit. Treatment at the WWTP consists of primary treatment and secondary treatment provided by way of the head works, an oxidation ditch, a secondary clarifier, sludge drying beds, sludge dewatering facilities, and storage ponds. The WWTP design capacity is 1.25 million gallons per day (MGD), and the plant is currently operating at an average daily flow of approximately 0.66 MGD (2020).

As part of the proposed project, the City would upgrade the Tehachapi WWTP processes to produce disinfected tertiary recycled water for groundwater recharge, which is filtered and disinfected wastewater. The recycled water would meet the requirements of California Water Code Title 22 Recycled Water Regulations. All proposed upgrades would occur within the existing property boundaries of the WWTP. The proposed WWTP improvements required to produce the tertiary effluent and operate the plant at full 1.25 MGD capacity would be located in the area shown in Figure 2.

1.2.2 Recharge Facilities

The proposed project would augment the City's existing groundwater supply by recharging up to 1,400 AFY of tertiary-treated recycled water into the Tehachapi Groundwater Basin. The proposed project includes surface spreading at the proposed spreading grounds to be constructed behind the existing Blackburn Dam. Blackburn Dam is owned and operated by TCCWD and was completed in 1990 as part of the Tehachapi Flood Control Project (AECOM 2017). At Blackburn Dam, recharge basins would be installed within the inner limits of the dam, as shown in Figure 2.

1.2.3 Conveyance Facilities

The City currently conveys secondary treated effluent from the WWTP to the reclamation areas and to the Borrow Pit. As part of the proposed project, the City would convey tertiary-treated recycled water to new spreading grounds at Blackburn Dam. Secondary effluent would no longer be produced at the Tehachapi WWTP.

To convey recycled water from the Tehachapi WWTP to the Blackburn Dam, the existing effluent pump station west of the Tehachapi WWTP at Pond 13 as shown on Figure 2 would need to be upgraded or replaced. An existing 12-inch force main would be used to convey the tertiary-treated recycled water to the Borrow Pit area. A new pump station would be installed within the existing boundary of the Borrow Pit as shown in Figure 2. From the Borrow Pit, a new 2-mile transmission pipeline would be needed to convey recycled water to the spreading basins behind the Blackburn Dam.

CHAPTER 2

Methodology

2.1 Biological Study Area

For purposes of this analysis, the BSA includes the approximately 85-acre project sites, as defined in Chapter 1.1, plus a 500-foot buffer around the WWTP and staging area, proposed effluent pump station, the existing Borrow Pit and proposed pump station, and the existing Blackburn Dam, as well as a 100-foot buffer around the proposed 12-inch pipeline (Figure 2). The project vicinity includes the area shown on Figure 2 and may be used interchangeably with “immediate vicinity.”

2.2 Existing Literature and Database Review

Prior to conducting the reconnaissance, Environmental Science Associates (ESA) conducted a thorough review of available information regarding the present biological conditions of the BSA. The following resources were referenced for the analyses of this report:

- California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base (CNDDB) was queried for special-status species records within the Tehachapi North and Tehachapi South United States Geological Survey (USGS) topographic quadrangle and surrounding 10 quadrangles. These 10 quadrangles include: Oiler Peak, Loraine, Emerald Mtn., Keene, Tehachapi NE, Cummings Mtn., Monolith, Liebre Twins, Tylerhorse Canyon, and Willow Springs (CDFW 2021).
- California Native Plant Society (CNPS), Inventory of Rare and Endangered Vascular Plants of California was queried for special-status species records within the Tehachapi North and South USGS topographic quadrangle and surrounding 10 quadrangles. These 10 quadrangles include: Oiler Peak, Loraine, Emerald Mtn., Keene, Tehachapi NE, Cummings Mtn., Monolith, Liebre Twins, Tylerhorse Canyon, and Willow Springs (CNPS 2021).
- United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System for Critical Habitat (USFWS 2021a).
- USFWS National Wetlands Inventory (NWI) online mapper (USFWS 2021b).
- United States Department of Agriculture (USDA) Soil Survey Geographic Data Base (USDA 2021).
- United States Geological Survey (USGS) National Hydrography Dataset (NHD) (USGS 2021).

2.3 Field Surveys

2.3.1 Special-Status Species Habitat Assessment

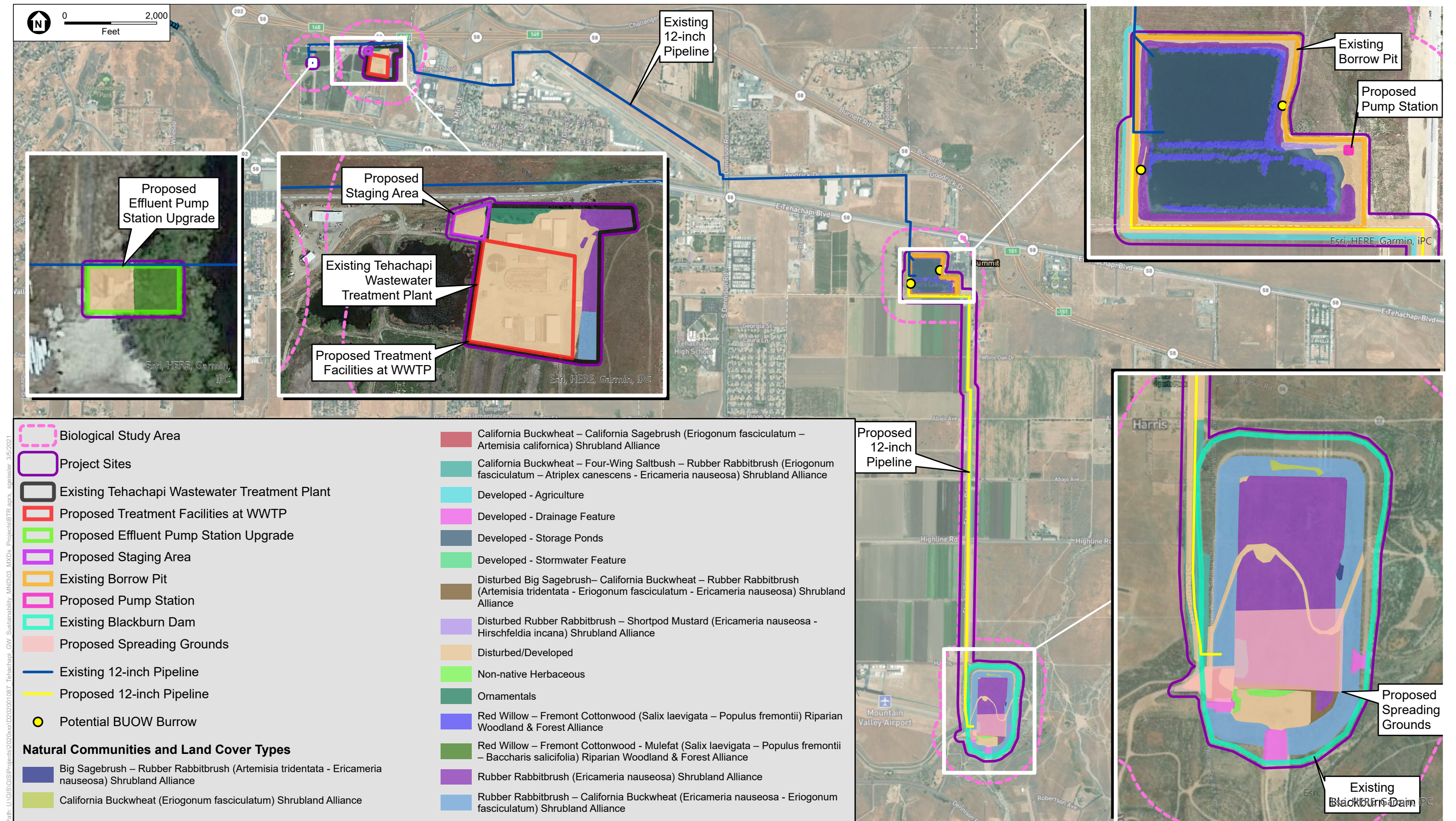
ESA biologists Karla Flores and Amanda French conducted a general biological reconnaissance survey and a burrowing owl habitat assessment of the BSA to characterize natural communities and evaluate the potential for burrowing owl presence. The field surveys took place on February 4 and 5, 2021. The temperature ranged from 41 degrees Fahrenheit in the mornings to 59 degrees Fahrenheit in the afternoons on both days with an average of 3 miles per hour (mph) winds and no cloud cover.

The potential of the BSA to support special-status plant or wildlife species was evaluated based on previously documented occurrence records, habitat suitability (i.e., soils, vegetation communities, disturbances, adjacent land uses, etc.), geographic range restrictions, and the overall ecological value of the BSA. Areas where the project may include crossing jurisdictional and/or aquatic resources under the potential regulation of the U.S. Army Corps of Engineers (USACE), RWQCB, or the California Department of Fish and Wildlife (CDFW) were mapped and evaluated.

All incidental, visual observations of flora and fauna, including sign (e.g., presence of scat) and any audible detections of wildlife, were noted during the assessment and are described in Chapter 4 of this report. All native and non-native natural communities and existing conditions were characterized and delineated on aerial photographs and ArcCollector during the field survey, and subsequently digitized using a Geographic Information System (GIS) software (ArcGIS). The field map was digitized using GIS technology and the resultant baseline mapping used to determine the extent of potential project effects on each plant community. Most descriptions of vegetation were characterized in the field in accordance with *A Manual of California Vegetation*, Second Edition (Sawyer 2009), or characterized based on species dominance when not recognized in the *Manual*. A detailed description of each natural community and land use is provided in Section 4.3 of this report. Photographs were taken during the field survey and are provided in **Appendix A – Representative Site Photos**.

2.3.2 Burrowing Owl Habitat Assessment

A burrowing owl habitat assessment was conducted within the BSA concurrently with the biological resources assessment. The habitat assessment followed the guidelines outlined in the *2012 California Department of Fish and Wildlife (CDFW) Staff Report on Burrowing Owl Mitigation*. Potentially suitable burrows observed during the habitat assessment were mapped using ArcCollector (**Figure 3**).



SOURCE: Mapbox/NearMap, 2020; ESA, 2021.

Tehachapi Groundwater Sustainability Project

Figure 3
Natural Communities and Land Cover Types

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CHAPTER 3

Regulatory Framework

This section provides a summary of the federal, state, and regional or local environmental regulations that govern the biological resources applicable to the BSA. This section also provides a summary of other state and local environmental guidelines or listings that evaluate the rarity of species or the habitats they depend on.

3.1 Federal

3.1.1 Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act to help protect the ecosystems upon which endangered and threatened species depend. FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3)(19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 Code of Federal Regulations [CFR] Section 17.3). “Harass” is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR Section 17.3). Actions that result in take can result in civil or criminal penalties.

3.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) generally prohibits the killing, possessing, or trading of migratory birds, bird parts, eggs, and nests, except as provided by the statute. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. It further provides that it is unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird...” (16 United States Code [USC] Section 703). As amended by U.S. Department of the Interior Solicitor’s Opinion M-37050 in December 22, 2017 and subsequently by USFWS guidance issued on April 11, 2018, the accidental or incidental take of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose is not to take birds. If the purpose of the action is not to take birds, Opinion M-37050 allows both the direct take of birds and their nests and indirect or incidental take that results in the direct loss of birds, nests, or eggs (USDOI 2017). Thus, the federal MBTA definition of “take” does not prohibit or penalize the incidental take of migratory birds that results

from actions that are performed without motivation to harm birds. This interpretation differs from the prior federal interpretation of “take”, which prohibited all incidental take of migratory birds, whether intentional or incidental.

The MBTA, first enacted in 1916, prohibits any person, unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention... for the protection of migratory birds...or any part, nest, or egg of any such bird” (16 U.S. Code 703).

3.1.3 Fish and Wildlife Conservation Act

The Fish and Wildlife Conservation Act declares that fish and wildlife are of ecological, educational, aesthetic, cultural, recreational, economic, and scientific value to the United States. The purposes of this Act are to encourage all federal departments and agencies to utilize their statutory and administrative authority, to the maximum extent practicable and consistent with each agency's statutory responsibilities and to conserve and to promote conservation of non-game fish and wildlife and their habitats. Another purpose is to provide financial and technical assistance to the states for the development, revision, and implementation of conservation plans and programs for nongame fish and wildlife.

3.2 State

3.2.1 Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, waters of the state fall under the jurisdiction of the appropriate RWQCB. Under the act, the RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters must meet waste discharge requirements of the RWQCB, which may be issued in addition to a water quality certification or waiver under Section 401 of the Clean Water Act (CWA). The RWQCB requires projects to avoid impacts to wetlands if feasible and requires that projects do not result in a net loss of wetland acreage or a net loss of wetland function and values. The RWQCB typically requires compensatory mitigation for impacts to wetlands and/or waters of the state. The RWQCB also has jurisdiction over waters deemed ‘isolated’ or not subject to Section 404 jurisdiction under *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC). Dredging, filling, or excavation of isolated waters constitutes a discharge of waste to waters of the state and prospective dischargers are required obtain authorization through an Order of Waste Discharge or waiver thereof from the RWQCB and comply with other requirements of Porter-Cologne Act.

The State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Wetland Procedures), as prepared by the State Water Resources Control Board (SWRCB), was implemented on May 28, 2020. The State Wetland Procedures include a definition for wetland waters of the state that include 1) all wetland waters of the U.S.; and 2) aquatic resources that meet both the soils and hydrology criteria for wetland waters of the U.S. but lack vegetation.

3.2.2 CEQA Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the CEQA Guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not been listed by either USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not at present have legal protection of any kind, CEQA calls for an assessment of whether any such resources would be affected, and requires findings of significance if there would be substantial losses. Natural communities listed by CNDDDB as sensitive are considered by CDFW to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents such as general plans often identify these resources as well.

3.2.3 California Endangered Species Act

Under the California Endangered Species Act (CESA), the CDFW is responsible for maintaining a list of threatened and endangered species (California Fish and Game Code 2007), candidate species, and species of special concern. Pursuant to the requirements of CESA, an agency reviewing a project within its jurisdiction must determine whether any state listed endangered or threatened species may be present on the project region and determine whether the project would have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any project that may impact a candidate species. If there were project-related impacts to species on the CESA threatened and endangered list, they would be considered “significant.” Impacts to “species of concern” would be considered “significant” under certain circumstances, discussed below.

3.2.4 California Fish and Game Code

Section 2080 – Threatened and Endangered Species

Section 2080 of the California Fish and Game Code states, “No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the [California Fish and Game] commission determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act.” Pursuant to Section 2081, CDFW may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of Understanding if: (1) the take is incidental to an otherwise lawful activity; (2) impacts of the authorized take are minimized and fully mitigated; (3) the permit is consistent with any regulations adopted pursuant to any recovery plan for the species; and (4) the applicant ensures adequate funding to implement the measures required by CDFW. CDFW makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

Section 3503 – Nesting Birds and Raptors

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations of these codes include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. This statute does not provide for the issuance of any type of incidental take permit.

Section 1600 – Lake and Streambed Alteration

Pursuant to Division 2, Chapter 6, Section 1600 et seq. of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream, or lake which supports fish or wildlife. A notification of a Lake or Streambed Alteration Agreement must be submitted to CDFW for “any activity that may substantially change the bed, channel, or bank of any river, stream, or lake.” In addition, CDFW has authority under California Fish and Game Code over wetland and riparian habitats associated with lakes and streams. The CDFW reviews proposed actions, and if necessary, submits to the applicant a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alteration Agreement.

Sections 3511, 4700, 5050 and 5515 – Fully Protected Species

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species. CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species. CDFW has informed nonfederal agencies and private parties that they must avoid take of any fully protected species in carrying out projects.

3.2.5 Native Plant Protection Act

The Native Plant Protection Act (California Fish and Game Code Sections 1900 et seq.) includes measures to preserve, protect, and enhance rare and endangered native plants. The list of native plants afforded protection pursuant to the Native Plant Protection Act includes those listed as rare and endangered under the CESA. The Native Plant Protection Act provides limitations on take as follows: “No person will import into this State, or take, possess, or sell within this State” any rare or endangered native plant, except in compliance with provisions of the act. Individual landowners are required to notify the CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material.

3.3 Regional or Local

No habitat conservation plans or natural community conservation plans are applicable to the BSA. The City of Tehachapi and Kern County local planning documents applicable to the BSA are described below.

3.3.1 City of Tehachapi General Plan

The City of Tehachapi General Plan includes the following objectives and policies related to biological resources:

Objective 1. Protect Important Natural Habitat for It to Function Appropriately in Support of Wildlife

Policies

NR26. As part of the discretionary review process for development proposals, identify significant resources through project design;

NR27. Maintain Antelope Run as a natural corridor to foster wildlife while being flanked by recreational trails and appropriate, low-intensity urban uses;

NR28. Protect and/or restore identified resources and areas.

Objective 2. Require The Use of Native Plant Species in Rural and Urban Areas

Policies

NR30. Enhance the existing tree resources through regulations that set forth thresholds for identifying and protecting a significant tree resource;

NR31. Maintain planting standards that:

- a. minimize the need for water;
- b. reflect the various intended physical contexts to which they will be applied.

3.3.2 Kern County General Plan

This regulatory framework identifies the policies that govern the conservation and protection of biological resources that must be considered by the County during the decision-making process for projects that have the potential to affect biological resources. The Kern County General Plan includes the following goals related to biological resources:

1.10.5 Threatened and Endangered Species

Policies

Policy 27: Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.

Policy 32: Riparian areas will be managed in accordance with the USACE and the CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.

CHAPTER 4

Existing Conditions

The BSA is located in the City of Tehachapi and in Kern County (Figures 1 and 2). This area is north of the Tehachapi Mountains between the San Joaquin Valley and the Mojave Desert. Land use within the immediate vicinity of the proposed project is primarily developed and agriculture.

4.1 Soils

Based on a review of the Natural Resources Conservation Services (NRCS) Web Soil Survey, seven soil types are known to occur within the BSA. Each is described in detail below.

Havala sandy loam, 0 to 2 percent slopes

This soil type formed from a parent material of alluvium derived from granite and is characterized as being prime farmland if irrigated as it is well drained with a moderate water capacity of 7.3 inches. Bedrock is usually present within more than 80 inches of the surface. The typical soil profile is as follows: 0 to 24 inches, sandy loam; 24 to 48 inches, sandy clay loam; and 48 to 65 inches, sandy loam. This soil type is situated in the southwest portion of the WWTP, surrounding the Borrow Pit, and along the northern section of the proposed 12-inch pipeline.

Pits

These soils consist of areas that have been excavated for sand or gravel. The areas are mostly on broad outwash plains and terraces of stream valleys and generally range from 3 to 30 acres. These areas have sparse vegetation consisting of drought-resistant plants. Slopes range mostly from 0 to 25 percent and steep escarpments are along the edges of the pits. This soil type is located in the south-central portion of Blackburn Dam and the center of the Borrow Pit.

Psamments-Xerolls complex, nearly level

This soil type formed from a parent material of alluvium derived from granite and is characterized as being somewhat excessively drained with a low water capacity of 4.6 inches. Bedrock is usually present within more than 80 inches of the surface. The typical soil profile is as follows: 0 to 12 inches, loamy sand; 12 to 48 inches, loamy sand; and 48 to 60 inches, stratified gravelly sand to gravelly loamy sand. This soil type is located along the east and west edges of Blackburn Dam.

Steuber sandy loam, 0 to 2 and 2 to 5 percent slopes

These soil types formed from a parent material of alluvium derived from granite and are characterized as being prime farmland if irrigated as they are well drained with a low water capacity of 6.0 inches. Bedrock is usually present within more than 80 inches of the surface. The typical soil profile is as follows: 0 to 12 inches, sandy loam, and 12 to 60 inches, sandy loam. Steuber sandy loam, 0 to 2 percent slopes, is located along the central portion of the proposed 12-inch pipeline alignment. Steuber sandy loam, 2 to 5 percent slopes, is located throughout the central portion of the WWTP, southern portion of the proposed 12-inch pipeline alignment, and northern portion of Blackburn Dam;

Tehachapi sandy loam, 2 to 15 percent slopes

This soil type formed from a parent material of alluvium derived from granite and is characterized as being prime farmland if irrigated as it is well drained with a moderate water capacity of 8.1 inches. Bedrock is usually present within more than 80 inches of the surface. The typical soil profile is as follows: 0 to 11 inches, sandy loam; 11 to 19 inches, sandy clay loam; 19 to 32 inches, clay loam; 32 to 44 inches, sandy loam; and 44 to 60 inches, stratified loamy sand to sandy clay loam. This soil type is situated in the northern portion of the WWTP.

Tehachapi variant sandy clay loam, 15 to 50 percent slopes

This soil type formed from a parent material of alluvium derived from granite and is characterized as being well drained with a high water capacity of 9.6 inches. Bedrock is usually present within more than 80 inches of the surface. The typical soil profile is as follows: 0 to 17 inches, sandy clay loam, and 17 to 60 inches, sandy clay loam. This soil type is located on the eastern edge of the WWTP.

Tujunga loamy sand, 2 to 5 percent slopes

This soil type formed from a parent material of alluvium derived from granite and is characterized as being farmland of statewide importance as it is somewhat excessively drained with a low water capacity of 4.8 inches. Bedrock is usually present within more than 80 inches of the surface. The typical soil profile is 0 to 60 inches, loamy sand. This soil type is situated throughout the center of Blackburn Dam.

4.2 Topography and Watersheds

The BSA is located within the Tehachapi Valley on the northeastern end of the Tehachapi Mountain Range, which divides the San Joaquin Valley and Mojave Desert. In general, the topography of the BSA is relatively flat ranging from 4,000 amsl at the WWTP to 4,200 feet amsl at Blackburn Dam. The BSA is located within two watersheds: Upper Tehachapi Creek watershed (HUC 180300030202) and Proctor Lake watershed (HUC180902060102) (EPA 2021). The WWTP, Borrow Pit, southern portion of the 12-inch proposed pipeline, and southwest edge of Blackburn Dam are located in the Upper Tehachapi Creek watershed, while the remainder of the 12-inch proposed pipeline alignment and Blackburn Dam are located within the Proctor Lake watershed.

4.3 Natural Communities and Land Cover Types

All natural communities and land cover types were characterized and delineated on aerial photographs and ArcCollector during the field survey, and then digitized on aerial maps using a Geographic Information System software (ArcGIS). The nomenclature used to describe the vegetation is based on *A Manual of California Vegetation*, Second Edition (Sawyer 2009), or characterized based on species dominance when not recognized in the *Manual*. Natural communities and land cover types located on the project sites are described in detail below and are depicted on Figure 3. The natural community and land cover classification locations and acreages are listed in **Table 1**, below.

TABLE 1
NATURAL COMMUNITIES AND LAND COVER TYPES WITHIN THE PROJECT SITES

Natural Community/Land Cover Type	Acreage
Aquatic/Riparian	
Red Willow – Fremont Cottonwood – Mulefat Riparian Woodland & Forest Alliance	0.01
Red Willow – Fremont Cottonwood Riparian Woodland & Forest Alliance	2.23
Terrestrial	
Big Sagebrush – Rubber Rabbitbrush Shrubland Alliance	0.01
California Buckwheat – California Sagebrush Shrubland Alliance	0.33
California Buckwheat – Four-Wing Saltbush – Rubber Rabbitbrush Shrubland Alliance	2.32
California Buckwheat Shrubland Alliance	0.22
Rubber Rabbitbrush – California Buckwheat Shrubland Alliance	12.06
Rubber Rabbitbrush Shrubland Alliance	19.42
Disturbed Big Sagebrush – California Buckwheat – Rubber Rabbitbrush Shrubland Alliance	0.84
Disturbed Rubber Rabbitbrush – Shortpod Mustard Shrubland Alliance	0.13
Non-native Herbaceous	0.36
Ornamentals	0.83
Developed/Disturbed Land Cover Types	
Disturbed/Developed	28.97
Developed – Agriculture	5.92
Developed – Drainage Feature	1.17
Developed – Storage Ponds	9.92
Developed – Stormwater Feature	0.02
TOTAL	84.76

4.3.1 Natural Communities

Non-native Herbaceous

This vegetation community was characterized and mapped in a small area within the southern portion of Blackburn Dam project site where the proposed spreading grounds will be located. The areas adjacent to this community are predominately comprised of disturbed or developed areas.

Species observed within this community included shortpod mustard (*Hirschfeldia incana*) and prickly Russian thistle (*Salsola tragus*).

Rubber Rabbitbrush (*Ericameria nauseosa*) Shrubland Alliance

This vegetation community was characterized and mapped throughout Blackburn Dam, along the surrounding sloped edge of the Borrow Pit pond, and along the east edge of the WWTP. Species observed within this community included rubber rabbitbrush (*Ericameria nauseosa*), California buckwheat (*Eriogonum fasciculatum*), and four-wing saltbush (*Atriplex canescens*).

Rubber Rabbitbrush – California Buckwheat (*Ericameria nauseosa* - *Eriogonum fasciculatum*) Shrubland Alliance

This vegetation community was characterized and mapped along the embankments surrounding Blackburn Dam and a small patch in the southeast corner of the WWTP. Species observed within this community included rubber rabbitbrush and California buckwheat.

Disturbed Rubber Rabbitbrush – Shortpod Mustard (*Ericameria nauseosa* - *Hirschfeldia incana*) Shrubland Alliance

This vegetation community was characterized and mapped in small patch along the northeast east edge of the Borrow Pit. Species observed within this community included rubber rabbitbrush and shortpod mustard.

Disturbed Big Sagebrush– California Buckwheat – Rubber Rabbitbrush (*Artemisia tridentata* - *Eriogonum fasciculatum* - *Ericameria nauseosa*) Shrubland Alliance

This vegetation community was characterized and mapped within Blackburn Dam along an old dirt road. Species observed within this community included big sagebrush (*Artemisia tridentata*), California buckwheat, rubber rabbitbrush, and non-native herbaceous species.

California Buckwheat (*Eriogonum fasciculatum*) Shrubland Alliance

This vegetation community was characterized and mapped in a small patch on the north slope of Blackburn Dam. Species observed within this community included California buckwheat and rubber rabbitbrush.

California Buckwheat – California Sagebrush (*Eriogonum fasciculatum* – *Artemisia californica*) Shrubland Alliance

This vegetation community was characterized and mapped along the southwest slope of Blackburn Dam. Species observed within this community included California buckwheat and California sagebrush (*Artemisia californica*).

**California Buckwheat – Four-Wing Saltbush – Rubber Rabbitbrush
(*Eriogonum fasciculatum* – *Atriplex canescens* - *Ericameria
nauseosa*) Shrubland Alliance**

This vegetation community was characterized and mapped along the dirt road leading into the entrance of Blackburn Dam. Species observed within this community included California buckwheat, four-wing saltbush, and rubber rabbitbrush.

**Big Sagebrush – Rubber Rabbitbrush (*Artemisia tridentata* -
Ericameria nauseosa) Shrubland Alliance**

This vegetation community was characterized and mapped in a small patch at the base of the east slope of Blackburn Dam. Species observed within this community included big sagebrush and rubber rabbitbrush.

**Red Willow – Fremont Cottonwood (*Salix laevigata* – *Populus
fremontii*) Riparian Woodland & Forest Alliance**

This vegetation community was characterized and mapped throughout the Borrow Pit. Species observed within this community included red willow and Fremont cottonwood. This community is considered a natural community by CDFW (CDFW 2020).

**Red Willow – Fremont Cottonwood - Mulefat (*Salix laevigata* –
Populus fremontii – *Baccharis salicifolia*) Riparian Woodland &
Forest Alliance**

This vegetation community was characterized and mapped along the edges of the pond near the proposed effluent pump station upgrade. Species observed within this community included red willow, Fremont cottonwood, and mulefat. This community is considered a sensitive natural community by CDFW (CDFW 2020).

Ornamentals

This vegetation community was characterized and mapped in a small area within the northern portion of the existing WWTP project site, and consisted of landscaped plantings associated with developed areas.

4.3.2 Land Cover Types

Disturbed/Developed

Much of the land in the project sites consists of disturbed or developed land, with the WWTP being made up almost entirely of this land cover type. The disturbed/developed land includes buildings and treatment facilities, gravel and dirt roads, and roadways and primarily devoid of vegetation.

Developed – Agriculture

The majority of the land surrounding the Proposed 12-inch Pipeline consists of developed agricultural land. The agriculture land supports row crops, non-native herbaceous vegetation, and recently tilled bare ground.

Developed – Drainage Features

This land cover type is made of man-made features to convey water into Blackburn Dam during large flood events. The majority of the land cover type is devoid of vegetation, with only a few small patches of non-native herbaceous cover, and consists of constructed concrete and rip-rap drainage features that are sloped to direct water into Blackburn Dam.

Developed – Storage Ponds

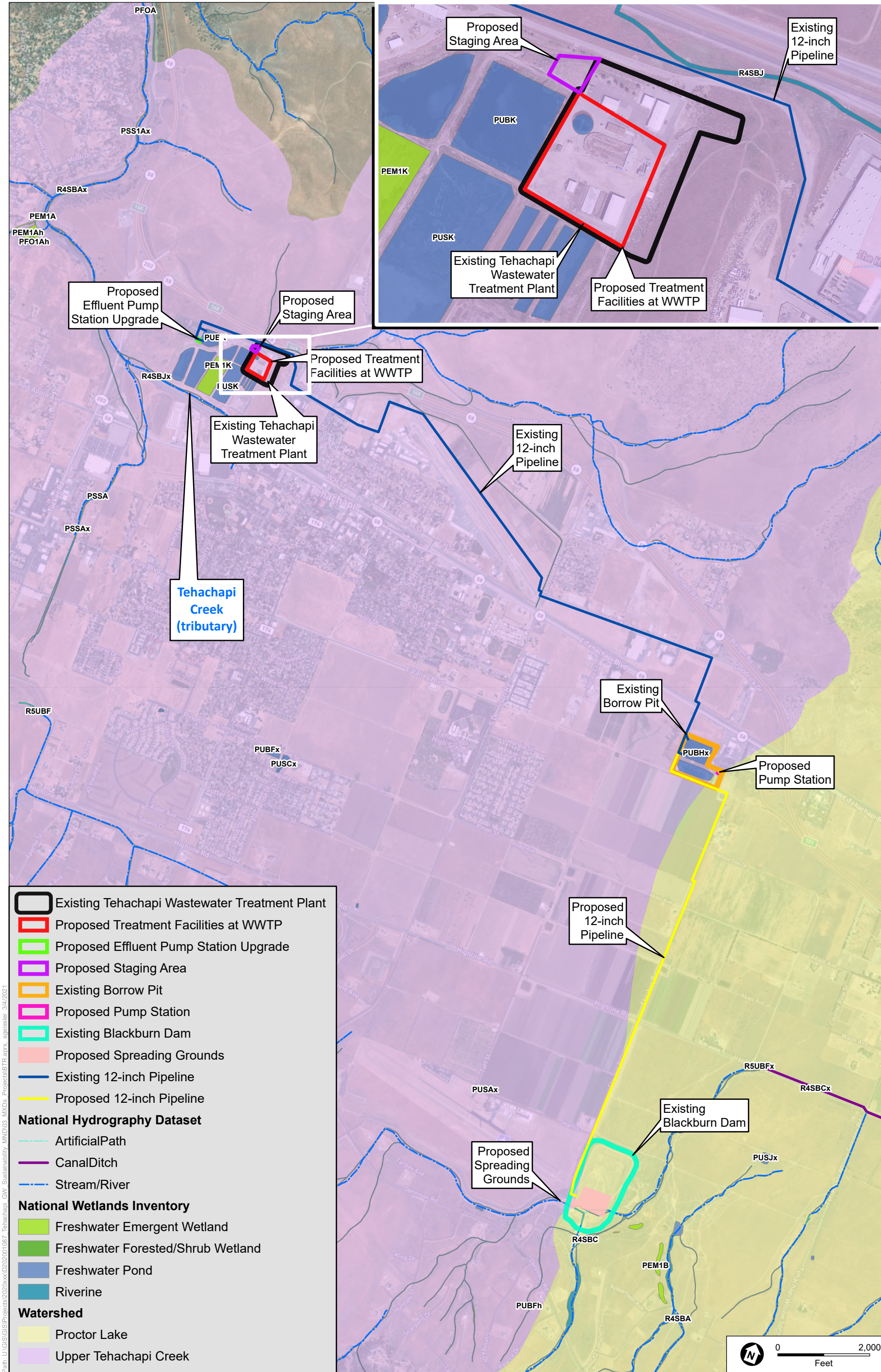
The Borrow Pit and storage ponds adjacent to the WWTP consist of this land cover type. The storage ponds were created as storage for treated wastewater. Red willow and Fremont cottonwood shrubs and trees are present along the edges of the Borrow Pit pond and pond adjacent to the proposed effluent pump station upgrade at the WWTP. Willow (*Salix* sp.), cottonwood (*Populus* sp.), cattail (*Typha* sp.), bulrush (*Schoenoplectus* sp.), and other wetland vegetation are present along the edges of the remaining ponds within the WWTP that are outside of the project sites but within the BSA.

Developed – Stormwater Feature

A small portion of the northern section of the proposed staging area consists of this land cover type. This feature conveys stormwater and consists of a rip-rap lined swale adjacent to Enterprise Way. A majority of the stormwater feature had been recently mowed; however, patches of non-native herbaceous cover was present between the rip-rap. Note the feature is too small to be seen on Figure 3.

4.4 Aquatic Resources

A formal aquatic resources delineation was not conducted at the time of the reconnaissance; however, several aquatic resources are located within and immediately adjacent to the project sites could potentially be subject to the regulatory authority of the USACE, CDFW, and/or RWQCB (Figure 4). These aquatic features are described below.



SOURCE: Mapbox/NearMap, 2020; NWI; ESA, 2021.

Tehachapi Groundwater Sustainability Project
Figure 4
Hydrology and National Wetlands Inventory



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NWI and NHD map a headwater tributary to Tehachapi Creek (tributary) that flows northeast between the railroad and California State Route 58 (Route 58) from Tehachapi to the city of Bakersfield (USFWS 2021b; USGS 2021). The tributary is located within the field just south of the WWTP ponds. A constructed stormwater feature is located at the proposed staging area that runs northeast to southwest through the property ultimately draining to the field adjacent to the west of the WWTP where the tributary is located. The stormwater feature within the proposed staging area receives flows from a mapped riverine feature in the hills to the north of the WWTP and Route 58 (see Figure 4), entering the feature from culverts under Route 58 and Enterprise Way. The stormwater feature likely only conveys water during high flows as it contained dense non-native herbaceous vegetation during the field survey.

Blackburn Dam is a large basin with a high capacity to hold water during flood events. Three constructed drainage features enter Blackburn Dam from the west, south, and east that convey flows from the hills to the south. NWI and NHD map these drainage features as streams (USFWS 2021b; USGS 2021); however, these drainage features appear to only convey flows during large storm events as they were constructed and highly vegetated with upland plant species.

4.5 General Plant and Wildlife Species

Common wildlife species are those species that are not protected by species-specific designations described for special-status species and may include both native and non-native species. General wildlife protection laws and statutes are applicable to certain common wildlife genera and species. The MBTA and California Fish and Game Code Sections 3503 and 3503.5 are applicable to common native bird and raptor species. Protections under CEQA may apply for movement/migration corridors and nursery sites used by various common wildlife species.

A variety of common wildlife species were observed or are expected to occur in the BSA which are typically found throughout the Tehachapi Valley. The presence of intermittent water sources within the ponds at the WWTP and Borrow Pit and dense riparian vegetation along the edges of those ponds provides added habitat diversity and may attract numerous species.

Common wildlife species observed or detected in the BSA during the field assessment included side-blotch lizard (*Uta stansburiana*), red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), northern flicker (*Colaptes auratus*), killdeer (*Charadrius vociferous*), house finch (*Haemorrhous mexicanus*), western meadowlark (*Sturnella neglecta*), common raven (*Corvus corax*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), red-winged blackbird (*Agelaius phoeniceus*), white crowned sparrow (*Zonotrichia leucophrys*), western kingbird (*Tyrannus verticalis*), American coot (*Fulica Americana*), canvasback (*Aythya valisineria*), mallard (*Anas platyrhynchos*), bufflehead (*Bucephala albeola*), ruddy duck (*Oxyura jamaicensis*), northern shoveler (*Spatula clypeata*), big-eared woodrat (*Neotoma macrotis*), coyote (*Canis latrans*), black-tailed jackrabbit (*Lepus californicus*), and desert cottontail (*Sylvilagus audubonii*).

4.6 Sensitive Biological Resources

Special-status plants, wildlife, and natural communities are defined as those that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies as under threat from human-associated developments. Some of these resources receive specific protection that is defined by federal or state endangered species legislation. Others have been designated as special-status on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives.

4.6.1 Special-Status Plants

Special-status plants are defined as follows:

- Plants listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the FESA or the CESA;
- Plants that meet the definitions of rare or endangered under State CEQA Guidelines Section 15380;
- Plants considered by the CNPS to be rare, threatened, or endangered (Rank 1A, 1B, 2A and 2B plants) in California; and
- Plants listed as rare under the California Native Plant Protection Act (Fish and Game Code 1900 et seq.).

A review of the CNDDDB (CDFW 2021) and the CNPS Inventory of Rare and Endangered Plants (CNPS 2021) revealed a total of 43 special-status plant species recorded within the 10 USGS quadrangles that were searched (refer to **Appendix B, CNDDDB, CNPS, and IPaC Search Results**). The potential for special-status plant species to occur in the BSA is based on vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences, geographic ranges and visual observations made during the field surveys. The 43 special-status plant species listed in Table 1 of **Appendix C, Potential to Occur Tables**, were determined to have varying levels of potential to occur within the BSA based on the criteria listed below.

- **Present:** Species was observed or detected during project-specific biological surveys.
- **High Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present on the project site. These species are generally common and/or widespread in the project area and vicinity.
- **Moderate Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present within the project site. These species are generally less common and/or widespread than species considered to have “high” potential to occur.
- **Low Potential:** Species identified in the literature search or known to occur in the region, but the habitat on site is of low or marginal quality and/or the project site occurs outside the species known geographic or elevational range. Distance to nearest known occurrence and the age of last reported local occurrence are also considered.

- **Absent/Not Expected:** Species known to occur in the region, but deemed absent because the project site is outside their known range or elevation, suitable habitat is lacking on the site, or the species was not observed during focused surveys and would have been conspicuous if present.

A comprehensive list of all special-status plant species reviewed is included in **Appendix C**, Table 1. Of these 25 species, it was determined that 13 of the special-status plant species do not have the potential to occur in the BSA due to lack of suitable habitat and/or range restrictions and are excluded from further discussion in this report. The remaining 12 of the 25 special-status plant species with records of occurrences in the region from the CNDDDB and CNPS are listed below in **Table 2**, as these species have at least a low potential to occur within the BSA.

4.6.2 Special-Status Wildlife

Special-status wildlife species evaluated in this BRTR include:

- Wildlife listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the FESA or CESA;
- Wildlife that meet the definitions of rare or endangered under State CEQA Guidelines Section 15380;
- Wildlife designated by CDFW as species of special concern; and
- Wildlife “fully protected” in California (Fish and Game Code Sections 3511, 4700, and 5050).

A review of the CNDDDB (CDFW 2021) and IPaC (USFWS 2021a) revealed a total of 23 special-status wildlife species recorded within the 10 USGS quadrangles that were searched. The potential for special-status wildlife species to occur in the BSA is based on vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences, geographic ranges and visual observations made during the focused sensitive wildlife surveys. A comprehensive list of all special-status wildlife species reviewed is included in **Appendix C**, Table 2. Of these 23, it was determined that 8 of the special-status wildlife species do not have the potential to occur in the BSA due to lack of suitable habitat and/or range restrictions and are excluded from further discussion in this report. The remaining 15 of the 23 special-status wildlife species, which were determined to have at least a low potential to occur within in the BSA, and are listed below in **Table 3** Special-Status Wildlife Species.

TABLE 2
SPECIAL-STATUS PLANT SPECIES

Common Name <i>Scientific Name</i>	Sensitivity Status ^a	Blooming Period	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
Asteraceae				
San Joaquin adobe sunburst <i>Pseudobahia peirsonii</i>	FT/SE/1B.1	February–April	Cismontane woodland and valley and foothill grassland in adobe clay.	Low Potential. Suitable habitat for this species occurs in the non-native herbaceous cover within the biological study area but is marginal at best; additionally, soil requirements are inappropriate and there are no known occurrences within the vicinity of the biological study area.
Cactaceae				
Bakersfield cactus <i>Opuntia basilaris</i> var. <i>treleasei</i>	FE/SE/1B.1	April–May	Chenopod scrub, cismontane woodland, and valley and foothill grassland in sandy or gravelly soils.	Low Potential. Suitable habitat and soils for this species occurs within the non-native herbaceous cover in the biological study area but is marginal at best; additionally, there are no known occurrences within the vicinity of the biological study area.
Grossulariaceae				
Aromatic canyon gooseberry <i>Ribes menziesii</i> var. <i>ixoderme</i>	--/--/1B.2	April	Chaparral and cismontane woodland.	Low Potential. Suitable habitat for this species occurs in the shrublands within the biological study area but is marginal at best; additionally, there are no known occurrences within the vicinity of the biological study area.
Papaveraceae				
Tejon poppy <i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>	--/--/1B.1	(February) March–May	Chenopod scrub and valley and foothill grassland.	Low Potential. Suitable habitat for this species occurs in the non-native herbaceous cover within the biological study area but is marginal at best; additionally, there are no known occurrences within the vicinity of the biological study area.
Polemoniaceae				
Tracy's eriastrum <i>Eriastrum tracyi</i>	--/SR/3.2	May–July	Chaparral, cismontane woodland, and valley and foothill grassland.	Low Potential. Species has been observed within the vicinity of the WWTP and habitat is present within the shrublands and non-native herbaceous cover in the biological study area; however, the single occurrence documented in the CNDDb is a historic occurrence from 1910.
Baja navarretia <i>Navarretia peninsularis</i>	--/--/1B.2	(May) June– August	Chaparral openings, lower montane coniferous forest, meadows and seeps, and pinyon and juniper woodland in mesic soils.	Low Potential. Suitable habitat for this species occurs in the shrublands within the biological study area but is marginal at best; additionally, soil requirements are inappropriate and there are no known occurrences within the vicinity of the biological study area.

Common Name <i>Scientific Name</i>	Sensitivity Status ^a	Blooming Period	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
Piute Mountains navarretia <i>Navarretia setiloba</i>	--/--/1B.1	April–July	Cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland in clay or gravelly loam soils.	Low Potential. Suitable habitat for this species occurs in the non-native herbaceous cover within the biological study area but is marginal at best; additionally, soil requirements are inappropriate and there are no known occurrences within the vicinity of the biological study area.
Latimer's woodland-gilia <i>Saltugilia latimeri</i>	--/--/1B.2	March–June	Chaparral, Mojavean desert scrub, and pinyon and juniper woodland in rocky or sandy soils.	Low Potential. Suitable habitat and soils for this species occurs in the shrublands within the biological study area but is marginal at best; additionally, there are no known occurrences within the vicinity of the biological study area.
Polygonaceae				
Kern buckwheat <i>Eriogonum kennedyi</i> var. <i>pinicola</i>	--/--/1B.1	May–June (July)	Chaparral and pinyon and juniper woodland in clay soils.	Low Potential. Suitable habitat for this species occurs in the shrublands within biological study area but is marginal at best; additionally, soil requirements are inappropriate and there are no known occurrences within the vicinity of the biological study area.
Liliaceae				
Alkali mariposa-lily <i>Calochortus striatus</i>	--/--/1B.2	April–June	Chaparral, chenopod scrub, meadow and seep, Mojavean desert scrub, and wetland.	Low Potential. Suitable habitat for this species occurs in the shrublands within biological study area but is marginal at best; additionally, there are no known occurrences within the vicinity of the biological study area.
Palmer's mariposa-lily <i>Calochortus palmeri</i> var. <i>palmeri</i>	--/--/1B.2	April–July	Chaparral, lower montane coniferous forest, and meadows and seeps in mesic soil.	Low Potential. Species has been observed within the vicinity of the WWTP and habitat is present in the shrublands; however, the nearest occurrence documented in the CNDDDB is a historic occurrence from 1889. Three other more recent occurrences are documented in the CNDDDB from 1995, but these occurrences are all more than 8 miles to the northeast.
Poaceae				
Aparejo grass <i>Muhlenbergia utilis</i>	--/--/2B.2	October–May	Chaparral, cismontane woodland, coastal scrub, marsh and swamp, meadow and seep, and ultramafic.	Low Potential. Suitable habitat for this species occurs in the shrublands within biological study area but is marginal at best; additionally, there are no known occurrences within the vicinity of the biological study area.

NOTES:

^a Status (Federal/State): FE-federally endangered; FT-federally threatened; SE-state endangered; SR-state rare species.

Status (CNPS): List 1B = Plants Rare, Threatened, endangered in California and elsewhere, List 2 = Plants Rare, Threatened, or, Endangered in California, But More Common Elsewhere, List 4 = Plants of Limited Distribution - A Watch List. Threat ranks .1 = seriously Endangered in California, .2 = fairly Endangered in California, .3 = Not very threatened in California (low degree/immediacy of threats or no current threats known).

SOURCE: CDFW, 2021; CNPS, 2021

TABLE 3
SPECIAL-STATUS WILDLIFE SPECIES

Common Name Scientific Name	Sensitivity Status	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
Invertebrates			
Crotch bumble bee <i>Bombus crotchii</i>	--/CE	Open grassland and scrub, Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	Moderate Potential. Habitat requirements are present in the biological study area and multiple detections have been recorded within the vicinity of the biological study area on CNDDDB between 1956-2017.
Amphibians			
Foothill yellow-legged frog <i>Rana boylei</i>	--/SE	Aquatic, chaparral, cismontane woodland, coastal scrub, Klamath/North coast flowing waters, lower montane coniferous forest, meadow and seep, riparian forest and woodland, and Sacramento/San Joaquin flowing waters.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.
Reptiles			
California legless lizard <i>Anniella spp.</i>	--/SSC	Coastal dune, valley and foothill grassland, chaparral, and coastal scrub in sandy soils.	Moderate Potential. Habitat and soil requirements are present in the biological study area and two historic detections in 1950 and 1955 have been recorded within the vicinity of the biological study area on CNDDDB.
California red-legged frog <i>Rana draytonii</i>	FT/SSC	Aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons.	Low Potential. Habitat requirements present within the ponds in the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.
Coast horned lizard <i>Phrynosoma blainvillii</i>	--/SSC	Chaparral, cismontane woodland, coastal bluff scrub, coastal scrub, desert wash, pinyon & juniper woodlands, riparian scrub, riparian woodland, and valley and foothill grassland.	Moderate Potential. Habitat requirements are present in the biological study area and multiple detections have been recorded within the vicinity of the biological study area on CNDDDB in 2010.
Northern California legless lizard <i>Anniella pulchra</i>	--/SSC	Chaparral, coastal dunes, and coastal scrub.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.
Southern California legless lizard <i>Anniella stebbinsi</i>	--/SSC	Broadleaved upland forest, chaparral, coastal dunes, and coastal scrub.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.
Birds			
Burrowing owl <i>Athene cunicularia</i>	--/SSC	Coastal prairie and scrub, Great Basin grassland and scrub, Mojavean desert scrub, Sonoran desert scrub, and valley and foothill grassland.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area. Two occurrences are documented in the

Common Name Scientific Name	Sensitivity Status	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
			CNDDDB from 2005 and 2009, but these occurrences are both more than 8 miles to the southeast. Two additional occurrences were documented in eBird, one that was 1.5 miles to the north of the WWTP in 2021, and one that was 2.2 miles to the southeast of Blackburn Dam in 2007; however, no occurrences were documented within the BSA. Additionally, a burrowing owl habitat assessment was conducted and resulted in two potential burrows but poor habitat.
California condor <i>Gymnogyps californianus</i>	FE/SE	Chaparral and valley and foothill grassland. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	Moderate Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area in the CNDDDB. Two eBird occurrences documented groups of this species foraging in an urbanized area approximately 0.5 mile southeast of the WWTP in 2015 and 2019 (eBird), so this species has a moderate potential to forage within the BSA.
Golden eagle <i>Aquila chrysaetos</i>	--/FP	Broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland and scrub, upper and lower montane coniferous forest, pinyon and juniper woodlands, and valley and foothill grassland. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Moderate Potential. Habitat requirements are present in the biological study area and multiple detections have been recorded within the vicinity of the biological study area on CNDDDB; however, the last documented historic occurrences were in 1941 and 1949. A number of eBird observations of golden eagle have been observed within the vicinity, including one observation in 2012 of a golden eagle observed approximately 0.75 mile east of the WWTP ponds (eBird 2021), so this species has a moderate potential to forage within the BSA.
Loggerhead shrike <i>Lanius ludovicianus</i>	--/SSC	Broadleaved upland forest, desert wash, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodlands, riparian woodland, and Sonoran desert scrub.	Moderate Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area in the CNDDDB. This species has been documented numerous times in eBird at the WWTP and Borrow Pit (eBird 2021).
Swainson's hawk <i>Buteo swainsoni</i>	--/ST	Great Basin grassland, riparian forest and woodland, and valley and foothill grassland.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.
Tricolored blackbird <i>Agelaius tricolor</i>	BCC/ST	Freshwater marsh, marsh, swamp, and wetland.	Moderate Potential. Habitat requirements are present in the biological study area and multiple detections have been recorded within the vicinity of the WWTP on CNDDDB; however, the last documented occurrences were in 1992 and 2008. More recent observation have also been documented in eBird in 2019 by the WWTP and in 2014 by the Borrow Pit (eBird 2021).

Common Name Scientific Name	Sensitivity Status	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
Mammals			
American badger <i>Taxidea taxus</i>	--/SSC	Alkali marsh and playa, alpine, alpine dwarf scrub, bog and fen, freshwater and brackish marsh, broadleaved upland forest, chaparral, chenopod scrub, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, desert dunes and wash, Great Basin grassland and scrub, Interior dunes, lone formation, Joshua tree woodland, limestone, upper and lower montane coniferous forest, marsh and swamp, meadow and seep, Mojavean desert scrub, montane dwarf scrub, north coast coniferous forest, old growth, pavement plain, redwood, Riparian forest, Riparian scrub, Riparian woodland, salt marsh, Sonoran desert scrub and thorn woodland, ultramafic, upper Sonoran scrub, and valley and foothill grassland.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.
Tehachapi pocket mouse <i>Perognathus alticola inexpectatus</i>	--/SSC	Chaparral, Joshua tree woodland, and valley and foothill grassland.	Moderate Potential. Habitat requirements are present in the biological study area and multiple detections have been recorded within the vicinity of the biological study area on CNDDB; however, the last documented occurrences were in 1959 and 1972.

NOTES:

^a Status (Federal/State): FE-federally endangered; FT-federally threatened; BCC-federal bird of conservation concern; SE-state endangered; CE-state candidate endangered; SA-state special animal; SSC-state species of special concern; FP-state fully protected; WL-state watch list.

SOURCE: CDFW, 2021, USFWS, 2021a

Burrowing Owl Habitat Assessment

A burrowing owl habitat assessment was conducted; only two potential burrows were observed within the BSA, which contained poor habitat for burrowing owl. No observations or detections of burrowing owls occurred within the burrowing owl habitat assessment area. Two burrows that could potentially be utilized by burrowing owls were identified and mapped within the Borrow Pit (Figure 3). The burrows were located within unvegetated, bare ground and the openings were approximately 4 to 5 inches in diameter. No obvious signs of recent use were present at the burrows. In addition, as summarized in Table 3, no occurrences were documented within the BSA. Thus, based on poor habitat, lack of suitable burrows, and no documented occurrences within the BSA, potential for burrowing owl to occur within the BSA is low.

4.6.3 Sensitive Natural Communities

A review of the CNDDDB (CDFW 2021) revealed one sensitive natural community, southern interior cypress forest, recorded within the 10 USGS quadrangles that were searched. Based on the field survey findings, this sensitive natural community does not occur in the BSA.

Two sensitive natural communities were identified within the BSA (Figure 3). Red Willow – Fremont Cottonwood (*Salix laevigata* – *Populus fremontii*) Riparian Woodland & Forest Alliance was mapped throughout the Borrow Pit. Red Willow – Fremont Cottonwood - Mulefat (*Salix laevigata* – *Populus fremontii* – *Baccharis salicifolia*) Riparian Woodland & Forest Alliance was mapped along the edges of the pond near the proposed effluent pump station upgrade. These natural communities are listed as S3 sensitive natural communities (CNPS 2021).

4.6.4 Critical Habitat

No designated critical habitat is mapped within or surrounding the BSA (USFWS 2021a). The nearest critical habitat is for California condor and is located approximately 10 miles south of the BSA within the Tehachapi Mountain range.

4.7 Wildlife Movement

Wildlife movement corridors are areas where regional wildlife populations regularly and predictably move during dispersal or migration. Movement corridors in California are typically associated with ridgelines, valleys, rivers and creeks supporting riparian vegetation. Movement corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, by human disturbance, or by the encroachment of urban development. Movement corridors are important as the combination of topography and other natural factors, in addition to urbanization, has fragmented or separated large open space areas. Several wildlife corridors are present within or adjacent to the project sites and are described below.

The city of Tehachapi is a wildlife corridor and resting stop for migrating birds along the Pacific Flyway. The Pacific Flyway is a major north-south flyway for migratory birds in America, extending from Alaska to Patagonia. Every year, migratory birds travel some or all of this

distance both in spring and in fall, following food sources, heading to breeding grounds, or travelling to overwintering sites. Birds that are migrating along the Pacific Flyway may stop to rest within the storage ponds. Some species may remain locally for the entire season, but most stay a few days before moving on (Wilson 2010).

The South Coast Missing Linkages Report identifies an important wildlife corridor linking the southern Coast and Transverse Ranges in the southwest to the Sierra Nevada Mountain Range in the north called the Tehachapi Connection (Penrod et al. 2003, White and Penrod 2012). The Tehachapi Connection maintains habitat for several special-status and endemic species within California, such as Tehachapi pocket mouse. The higher elevation forest and shrubland habitats serve as connections for species, such as mule deer, mountain lion, and western gray squirrel, while the desert slopes serve as connections for species, such as Tehachapi pocket mouse (Penrod et al. 2003). However, Route 58 is considered a substantial barrier to movement along the Tehachapi Connection (Penrod et al. 2003). Although the BSA is not within the Tehachapi Connection, Blackburn Dam is located less than a mile north of the southeastern branch of this regional connection.

CHAPTER 5

Project Impacts and Avoidance, Minimization, and Mitigation

5.1 Approach to the Analysis

The proposed project is expected to result in direct, indirect, and cumulative impacts to biological resources due to construction and operation of the proposed project. Under the stipulations of CEQA, potential impacts to biological resources could be considered significant if actions associated with the proposed project are not mitigated. In Section 5.2, Thresholds of Significance, the CEQA thresholds for biological resources are provided. In Section 5.3, Impact Analysis, the potential impacts of the proposed project are evaluated in terms of the thresholds of significance—both beneficial and adverse impacts. For potential adverse impacts deemed significant to biological resources, avoidance, minimization, and mitigation measures were developed and are provided in Section 5.4, Avoidance, Minimization, and Mitigation Measures. Implementation of the proposed mitigation measures would result in a less than significant impact determination for biological resources from the proposed project.

5.2 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the project would result in a significant impact on biological resources if it would:

1. 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 Game or U.S. Fish and Wildlife Service.
2. 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 Game or US Fish and Wildlife Service.
3. 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.
4. 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.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

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

5.3 Impacts Analysis

5.3.1 Candidate, Sensitive, or Special-Status Species

Issue 1: Would the proposed project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Special-Status Plants

There is a low potential for 12 special-status plant species to occur in the BSA. These plants include San Joaquin adobe sunburst, Bakersfield cactus, Aromatic canyon gooseberry, Tejon poppy, Tracy's eriastrum, Baja navarretia, Piute Mountains navarretia, Latimer's woodland-gilia, Kern buckwheat, alkali mariposa-lily, Palmer's mariposa-lily, and Aparejo grass. Based on the date of documentation of CNDDDB occurrences and current marginal habitat conditions and site use, these species are either not expected or previous occurrences are expected to be extirpated. Impacts to special-status plants would be less than significant as a result of the proposed project and no mitigation measures would be required.

Special-Status Wildlife

Special-status wildlife species have the potential to be present in the BSA and could be impacted by the proposed project. Based on the presence of suitable habitat within the project sites, there is moderate potential for eight special-status wildlife species to occur in the project sites: Crotch bumble bee, California legless lizard, coast horned lizard, California condor, golden eagle, loggerhead shrike, tricolored blackbird, and Tehachapi pocket mouse.

Tehachapi Pocket Mouse

The Tehachapi pocket mouse (TPM) is a State Species of Special Concern. This species is a small, granivorous nocturnal rodent. It can be found in sandy soils in a variety of vegetation communities including annual grasslands and rubber rabbitbrush scrub at elevations between 3,500-6,000 feet. Recently, TPM has been documented in nearby fallow fields dominated by Russian thistle (*Salsola tragus*). Both rubber rabbitbrush and Russian thistle occur in portions of the BSA and may be impacted by ground disturbing activities, most notably at Blackburn Dam. Of the 35.1 acres of available habitat for TPM within the BSA, permanent habitat modification of approximately 6.93 acres of rubber rabbitbrush scrub and mixed rubber rabbitbrush –California buckwheat scrub communities in the proposed spreading grounds and removal of 0.96 acre of mixed rubber rabbitbrush scrub along the proposed 12-inch pipeline (see Table 4) would result in habitat loss or conversion, and could result in direct mortality of TPM or disrupt breeding of the species during construction. It should be noted that the proposed spreading grounds area is currently used for recharge and thus likely exhibits some level of disturbance to these

communities from existing activities. Nonetheless, with the implementation of the proposed project, the removal of rubber rabbitbrush scrub could result in potential permanent, direct impacts to TPM individuals and suitable habitat for TPM, which would be potentially significant. Incorporation of Mitigation Measure BIO-1 recommended in Section 5.4 would reduce this potential significant impact to a less than significant level.

Tricolored Blackbird

Tricolored blackbird is a State Threatened species. Historically, most colonies of the tricolored blackbird were in freshwater marshes dominated by cattail or tule, but some were in nettles, thistles, and willows. However, the use of freshwater marshes as breeding colony sites decreased from 93 percent in the 1930s to 54 percent in the 1970s. An increasing percentage of colonies since the 1970s have been reported in Himalayan blackberry (*Rubus armeniacus*) and thistles (*Cirsium* sp.) and some of the largest recent colonies were found in silage and grain fields near dairies in the San Joaquin Valley. Other less commonly used nesting substrates include tamarisk, elderberry/poison oak, and riparian scrublands and forests and wintering tricolored blackbirds often congregate in large, mixed-species blackbird flocks that forage in grasslands and agricultural fields with low-growing vegetation and at dairies and feedlots (Shuford and Gardali 2008).

Suitable breeding and foraging habitat for the tricolored blackbird is present within the red willow, Fremont cottonwood, and mulefat forested portions of the riparian habitat present within the BSA. This species may also utilize the agricultural fields for nesting and foraging as well, such as those dominated by herbaceous vegetation. Thus, out of a total of 8.16 acres of available tricolored blackbird habitat within the BSA, the project could result in habitat removal of approximately 0.01 acre of the Red Willow – Fremont Cottonwood – Mulefat Riparian Woodland and Forest Alliance for installation of the proposed effluent pump station upgrade and approximately 5.92 acres of Developed – Agriculture lands for installation of the proposed 12-inch pipeline. Additionally, if proposed project construction takes place during the nesting season, disturbance from construction activities could result in potential indirect impacts to tricolored blackbird nesting activity.

With the implementation of the proposed project, the removal of riparian and agricultural vegetation, as well as the indirect disturbance (e.g., noise, human activity) from construction during the breeding season, could result in potential permanent direct and temporary indirect impacts to the suitable breeding and foraging habitat for the tricolored blackbird. Incorporation of Mitigation Measure BIO-2 and BIO-4 recommended in Section 5.4 would reduce potential significant impacts to a less than significant level.

California Condor and Golden Eagle

California condor is a Federal and State Endangered species, and golden eagle is a State Fully Protected species. Although California condor and golden eagle have a moderate potential to forage within the BSA, these species are not expected to nest within the BSA due to lack of cliff-walled canyons that contain their preferred nesting habitat. Golden eagles can sometimes nest in large trees in open areas; however, the trees within the BSA are limited to riparian trees within the Borrow Pit and are likely not suitable habitat for golden eagle nesting. Thus, with

implementation of the proposed project, which would impact limited areas of potential foraging habitat, and in light of the extensive foraging habitat of native shrublands surrounding the BSA and throughout the region that would remain available, impacts to California condor and golden eagle foraging habitat are less than significant, and no mitigation is required.

Crotch Bumble Bee, California Legless Lizard, Coast Horned Lizard, and Loggerhead Shrike

Crotch bumble bee is a State Candidate Threatened species, and California legless lizard, coast horned lizard, and loggerhead shrike are State Species of Special Concern. Native upland habitat occurs within the BSA that is suitable for Crotch bumble bee, California legless lizard, coast horned lizard, and loggerhead shrike. With implementation of the proposed project, approximately 14.85 acres out of a total of 35.33 acres of shrubland within the BSA could be removed resulting in potential permanent, direct impacts to the suitable habitat for these species. The native shrubland habitats are ubiquitous in the region.

During construction, it is expected that if Crotch bumble bee and/or loggerhead shrike is in the vicinity of the work area, these species, if present, would move out of the way of vehicles and construction equipment. Direct impacts to these species would be less than significant as there is ample native shrubland within the area and vicinity to provide habitat for these species. Although California legless lizard and coast horned lizard would also be expected to move out of the way, there is greater potential for direct impacts to these species to occur. Additionally, if any loggerhead shrikes are nesting within the proposed project areas, impacts to this species may occur. Thus, impacts to these special-status wildlife species are potentially significant. Implementation of Mitigation Measures BIO-3 and BIO-4 recommended in Section 5.4 would reduce potentially significant impacts to California legless lizard, coast horned lizard, and loggerhead shrike to a less than significant level.

5.3.2 Sensitive Natural Communities or Riparian Habitat

Issue 2: Would the proposed project 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 US Fish and Wildlife Service?

As shown in **Table 4**, the proposed project could permanently impact up to 0.01 acre of Red Willow – Fremont Cottonwood - Mulefat (*Salix laevigata* – *Populus fremontii* – *Baccharis salicifolia*) Riparian Woodland & Forest Alliance from construction of the proposed effluent pump station, and up to 0.01 acre of Red Willow – Fremont Cottonwood (*Salix laevigata* – *Populus fremontii*) Riparian Woodland & Forest Alliance from modification to laterals of the 12-inch pipeline extending into the Borrow Pit. Although impacts would be limited, impacts to sensitive natural communities from implementation of the proposed project are potentially significant. With implementation of Mitigation Measure BIO-5 (described in Section 5.4 below), impacts will be reduced to less than significant.

TABLE 4
IMPACTS TO NATURAL COMMUNITIES AND LAND COVER TYPES WITHIN THE PROJECT SITES

Natural Community/Land Cover Type	Existing	Impacts					
		Proposed Effluent Pump Station Upgrade (acres)	Proposed Staging Area (acres)	Proposed Treatment Facilities (acres)	Proposed Pump Station (acres)	Proposed 12-inch Pipeline (acres)	Proposed Spreading Grounds (acres)
Aquatic/Riparian							
Red Willow – Fremont Cottonwood - Mulefat Riparian Woodland & Forest Alliance	0.01	0.01	-	-	-	-	-
Red Willow – Fremont Cottonwood Riparian Woodland & Forest Alliance	2.23	-	-	-	-	0.01	-
Terrestrial							
Big Sagebrush – Rubber Rabbitbrush Shrubland Alliance	0.01	-	-	-	-	-	-
California Buckwheat – California Sagebrush Shrubland Alliance	0.33	-	-	-	-	-	0.33
California Buckwheat – Four-Wing Saltbush – Rubber Rabbitbrush Shrubland Alliance	2.32	-	-	-	-	1.84	0.10
California Buckwheat Shrubland Alliance	0.22	-	-	-	-	-	-
Rubber Rabbitbrush – California Buckwheat Shrubland Alliance	12.06	-	-	-	-	0.20	0.68
Rubber Rabbitbrush Shrubland Alliance	19.42	-	-	-	-	0.76	5.72
Disturbed Big Sagebrush – California Buckwheat – Rubber Rabbitbrush Shrubland Alliance	0.84	-	-	-	-	-	0.53
Disturbed Rubber Rabbitbrush – Shortpod Mustard Shrubland Alliance	0.13	-	-	-	-	-	-
Non-native Herbaceous	0.36	-	-	-	-	-	0.01
Ornamentals	0.83	-	0.1	-	-	0.53	-
Developed/Disturbed Land Cover Types							
Disturbed/Developed	28.97	0.02	0.34	3.90	0.01	17.58	0.88
Developed – Agriculture	5.92	-	-	-	-	5.92	-
Developed – Drainage Feature	1.17	-	-	-	-	-	0.06

Natural Community/Land Cover Type	Existing	Impacts					
		Proposed Effluent Pump Station Upgrade (acres)	Proposed Staging Area (acres)	Proposed Treatment Facilities (acres)	Proposed Pump Station (acres)	Proposed 12-inch Pipeline (acres)	Proposed Spreading Grounds (acres)
Developed – Storage Ponds	9.92	-	-	-	-	0.12	-
Developed – Stormwater Feature	0.02	-	0.02	-	-	-	-
TOTAL	84.76	0.03	0.46	3.87	0.01	22.9	8.22

5.3.3 Aquatic Resources - Wetlands

Issue 3: Would the proposed project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

There are several constructed aquatic features within or adjacent to the project sites that may be impacted during construction of the proposed project. These features include land cover mapped as Developed – Drainage Feature, Developed – Storage Ponds, Developed – Stormwater Feature, the Red Willow-Fremont Cottonwood-Mulefat habitat within the Borrow Pit, and the Red Willow – Fremont Cottonwood habitat at the effluent pump station.

As detailed in Section 4.4, there is a riverine feature that conveys offsite sheet flow through a small portion of the project site in the proposed staging area. This is a constructed stormwater feature with ephemeral flows that continues offsite to the west into Tehachapi Creek. In addition, three constructed drainage features enter Blackburn Dam from the west, south, and east that convey flows from the hills to the south only during large storm events. These constructed features are not expected to support wetlands.

Based the Navigable Waters Protection Rule, it is anticipated that the aquatic resources in the BSA are not considered federal wetlands or waters of the U.S. that would be subject to the regulatory jurisdiction of the USACE. Similarly, based on the State Wetland Procedures, it is anticipated that the aquatic resources in the BSA are not considered wetlands or waters of the State since they were constructed within uplands for purposes of municipal water/wastewater treatment. However, potential impacts to the Red Willow-Fremont Cottonwood-Mulefat vegetation at the Borrow Pit and the Red Willow – Fremont Cottonwood habitat at the effluent pump station could require a Lake or Streambed Alteration Agreement from CDFW and impacts to this sensitive natural community could be potentially significant. With implementation of Mitigation Measure BIO-5 (described in Section 5.4 below), mitigation for potential impacts to riparian habitat that cannot be avoided or minimized, impacts will be reduced to less than significant.

5.3.4 Wildlife Corridors

Issue 4: Would the proposed project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Though the BSA lies within the Pacific Flyway and is adjacent to Tehachapi Connection, construction of the proposed project is not anticipated to significantly restrict the movement of wildlife because the BSA would still remain accessible and traversable to any wildlife that may be foraging or moving through the area during construction and operational activities. These areas will remain intact and will continue to provide water sources and habitat for wildlife movement during and following completion of the proposed construction activities within the BSA. Additionally, the majority of the WWTP and 12-inch proposed pipeline corridor is currently heavily disturbed (i.e. due to vehicle travel), and species are most likely used to the level of disturbance at these locations and aware of the travel routes needed to access other adjacent open areas and corridors.

Although construction activities will introduce a temporary disruption to adjacent habitats from the presence of large equipment and people in the area within limited, discrete areas of the BSA, work activities will be limited to daylight hours and will not disrupt migration and local movement through the area that generally occurs during nighttime hours. Therefore, construction activities and operations are not anticipated to disrupt wildlife movement.

Nesting Avian Species

Nesting birds and raptors have the potential to be present in the project sites and could be affected by the proposed project. Raptors, and migratory and common bird species may utilize all habitats within the project sites, including but not limited to, trees, vegetation, and building structures for foraging and breeding purposes. These species could be adversely affected by habitat modification and noise-related disturbances during construction that could disrupt breeding behavior and nesting activity. Thus, impacts to nesting birds from implementation of the proposed project are potentially significant. With implementation of Mitigation Measure BIO-4 (described in Section 5.4 below), impacts will be reduced to less than significant.

5.3.5 Local Policies or Ordinances

Issue 5: Would the proposed project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project is within the jurisdiction of the City of Tehachapi General Plan and Kern County General Plan.

Tehachapi General Plan

Per Policies_NR26, which requires identification significant resources through project design, and NR28, which requires protection and/or restoration of identified resources and areas, and NR30

which requires enhancement of the existing tree resources through regulations that set forth thresholds for identifying and protecting a significant tree resource, the analysis provided in Sections 5.3.1 through 5.3.4 above identify important biological resources (e.g., special-status species, sensitive natural communities [including tree resources], aquatic resources, and wildlife movement), and prescribe mitigation for potentially significant impacts to those resources that may result from the proposed project. Thus, with implementation of Mitigation Measure BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5, the proposed project would not conflict with the policies of the Tehachapi General Plan.

Kern County General Plan

Per Policy 27, threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws. As detailed in Section 5.3.1 above, special-status species were analyzed in accordance with federal and state regulations, and where necessary, mitigation measures were prescribed for the protection of special-status species. Per Policy 32, riparian areas will be managed in accordance with the USACE and the CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns. As detailed in Section 5.3.3 above, aquatic resources potentially subject to the regulatory authority of the CDFW and RWQCB were identified in accordance state regulations, and a mitigation measure was prescribed to conduct an aquatic resources delineation and provide mitigation for impacts that cannot be avoided or minimized. Thus, with implementation of Mitigation Measure BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5, the proposed project would not conflict with the policies of the Kern County General Plan.

5.3.6 Conservation Plans

Issue 6: Would the proposed project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No habitat conservation plans or natural community conservation plans are applicable to the BSA. As a result, no conflicts with the provisions of an adopted HCP would occur as a result of the proposed project.

5.4 Avoidance, Minimization, and Mitigation Measures

5.4.1 Special-Status Wildlife

Construction, operations, and maintenance activities could result in impacts to special-status wildlife. The following measures are recommended to be implemented to avoid potentially significant impacts to special-status wildlife.

BIO-1: Impacts to Tehachapi Pocket Mouse and Occupied Habitat. Prior to commencement of project activities at the proposed 12-inch pipeline area or proposed

spreading grounds within Blackburn Dam, a qualified biologist shall conduct a live-trapping survey for the Tehachapi pocket mouse, in accordance with CDFW standard live-trapping protocols. If live-trapping surveys show that the Tehachapi pocket mouse occupies the proposed 12-inch pipeline area or proposed spreading grounds within Blackburn Dam, the following measures will be implemented to avoid potential adverse effects to this species and its habitat:

- If Tehachapi pocket mouse are detected during the live-trapping, occupied habitat should be avoided wherever possible, including protective buffers around the occupied habitat as recommended by the qualified mammologist conducting the trapping. If construction activities cannot avoid occupied habitat, within three days prior to the commencement of work activities, a qualified biologist shall trap and relocate any individuals out of the work area. CDFW shall be consulted on the relocation methods prior to relocation efforts, as well as any additional avoidance and minimization measures to protect individuals.

BIO-2: Impacts to Tricolored Blackbird. Prior to implementation of the proposed project, a qualified biologist shall conduct focused surveys during the nesting season for tricolored blackbird at the WWTP and Borrow Pit to determine if this species uses the project sites for nesting. If tricolored blackbirds are not detected within the suitable breeding habitat, no further action is necessary.

If tricolored blackbirds are observed nesting within or adjacent to the project sites, construction activities within 300 feet of suitable nesting habitat shall be avoided to the extent feasible and mitigation measure BIO-4 shall be implemented for species avoidance. If occupied nesting habitat for tri-colored blackbird is unavoidable, suitable nesting habitat shall be replaced at minimum ratio of 2:1 at a suitable location approved by CDFW. The replacement habitat shall be suitable to support tricolored blackbird breeding habitat with similar nesting and foraging habitat functions as is provided by the existing habitat.

BIO-3: Pre-Construction Wildlife Clearance Surveys. Prior to any ground disturbance, a qualified biologist shall conduct a pre-construction wildlife clearance survey throughout the project sites, including an approximate 100-foot buffer for California legless lizard and coast horned lizard. If California legless lizard or coast horned lizard are observed within 100 feet of the project work areas during pre-construction clearance surveys, a qualified biologist shall relocate the individuals to suitable habitat located a sufficient distance away from the impact areas to ensure that construction-related impacts are avoided.

5.4.2 Nesting Avian Species

Construction activities could result in impacts to nesting avian species and active nests. The following mitigation measure is recommended to be implemented to avoid potentially significant impacts to nesting avian species and active nests during project construction activities.

BIO-4: Impacts to Nesting Avian Species and Active Nests. If the nesting avian season cannot be avoided and construction or vegetation removal is initiated between March 1 – September 15 (or January 1 to August 1 for raptors), the following measures would

reduce potential impacts to nesting and migratory birds and raptors to less than significant levels:

- Within 10 days of site clearing, a qualified biologist shall conduct a preconstruction, migratory bird and raptor nesting survey. The biologist must be qualified to determine the status and stage of nesting by migratory birds and all locally breeding raptor species without causing intrusive disturbance. The survey shall cover all reasonably potential nesting locations for the relevant species on or closely adjacent to the proposed project site.
- The preconstruction survey shall cover all reasonably potential nesting locations on and within 300 feet of the proposed removal areas, and areas that would be occupied by ground-nesting species, such as killdeer. A 500-foot radius shall be surveyed in areas containing suitable habitat for nesting raptors, such as trees, utility poles and buildings.
- If an active nest is confirmed by the biologist, no construction activities shall occur within 300 feet of the nesting site for migratory birds and within 500 feet of the nesting site for raptors and listed avian species. The buffer zones around any nest within which project-related construction activities would be avoided can be reduced as determined acceptable by a qualified biologist. Construction activities may resume once the breeding season ends (March 1 – September 15), or the nest has either failed or the birds have fledged.

5.4.3 Sensitive Natural Communities / Aquatic Resources - Wetlands

Construction activities could result in limited impacts to sensitive natural communities at the WWTP ponds and the Borrow Pit. The following measure is recommended to be implemented to avoid potentially significant impacts to sensitive natural communities during construction activities.

BIO-5: Impacts to Sensitive Natural Communities. Impacts to sensitive natural communities (red willow and Fremont cottonwood dominated vegetation), shall be avoided if feasible. If avoidance of sensitive natural communities is not feasible during construction activities, a qualified biologist or restoration ecologist shall prepare and implement a revegetation plan. The revegetation plan shall include restoration of sensitive natural communities at a minimum of 1:1 mitigation-to-impact ratio.

CHAPTER 6

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Appendix A

Representative Site Photos





Photo 1. Facing southwest. Photo depicts existing treatment facilities within WWTP



Photo 2. Facing east. Photo depicts stormwater feature at WWTP.



Photo 3. Facing south. Photo depicts existing pump station in location of proposed effluent pump station upgrade.



Photo 4. Facing south. Photo depicts location of proposed pump station at the Borrow Pit.



Photo 5. Facing east. Photo depicts the southern edge of the Borrow Pit pond, including willow, rubber rabbitbrush, and the disturbed/developed dirt road surrounding the pond.



Photo 6. Facing south. Photo depicts location of the northern portion of the proposed 12-inch pipeline on the west side of Steuber Road.



Photo 7. Facing south. Photo depicts location of the southern portion of the 12-inch pipeline near Blackburn Dam.



Photo 8. Facing southwest. Photo depicts the proposed spreading grounds and west drainage feature at Blackburn Dam.



Photo 9. Facing southeast. Photo depicts an overview of Blackburn dam from the west slope.



Photo 10. Facing east. Photo depicts the proposed spreading grounds to the right and east drainage feature to the left within Blackburn Dam.

Appendix B

CNDDDB, CNPS, and IPaC Search Results





Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad> IS > Tehachapi North (3511824)> OR > Oiler Peak (3511835)> OR > Loraine (3511834)> OR > Emerald Mtn. (3511833)> OR > Keene (3511825)> OR > Tehachapi NE (3511823)> OR > Cummings Mtn. (3511815)> OR > Tehachapi South (3511814)> OR > Monolith (3511813))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American badger <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
aromatic canyon gooseberry <i>Ribes menziesii</i> var. <i>ixoderme</i>	PDGRO02104	None	None	G4T2	S2	1B.2
Baja navarretia <i>Navarretia peninsularis</i>	PDPLM0C0L0	None	None	G3	S2	1B.2
Bakersfield cactus <i>Opuntia basilaris</i> var. <i>treleasei</i>	PDCAC0D055	Endangered	Endangered	G5T1	S1	1B.1
Bendire's thrasher <i>Toxostoma bendirei</i>	ABPBK06050	None	None	G4	S3	SSC
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
calico monkeyflower <i>Diplacus pictus</i>	PDSCR1B240	None	None	G2	S2	1B.2
California legless lizard <i>Anniella</i> spp.	ARACC01070	None	None	G3G4	S3S4	SSC
coast horned lizard <i>Phrynosoma blainvillii</i>	ARACF12100	None	None	G3G4	S3S4	SSC
Comstock's blue butterfly <i>Euphilotes glaucon comstocki</i>	IILEPG201A	None	None	G5T2	S2	
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	PDAST5L0A1	None	None	G4T2	S2	1B.1
Crotch bumble bee <i>Bombus crotchii</i>	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
desert tortoise <i>Gopherus agassizii</i>	ARAAF01012	Threatened	Threatened	G3	S2S3	
foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050	None	Endangered	G3	S3	SSC
golden eagle <i>Aquila chrysaetos</i>	ABNKC22010	None	None	G5	S3	FP
grey-leaved violet <i>Viola pinetorum</i> ssp. <i>grisea</i>	PDVIO04431	None	None	G4G5T3	S3	1B.2
Kern buckwheat <i>Eriogonum kennedyi</i> var. <i>pinicola</i>	PDPGN083B4	None	None	G4T1	S1	1B.1
Latimer's woodland-gilia <i>Saltugilia latimeri</i>	PDPLM0H010	None	None	G3	S3	1B.2



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Le Conte's thrasher <i>Toxostoma lecontei</i>	ABPBK06100	None	None	G4	S3	SSC
Madera leptosiphon <i>Leptosiphon serrulatus</i>	PDPLM09130	None	None	G3	S3	1B.2
merlin <i>Falco columbarius</i>	ABNKD06030	None	None	G5	S3S4	WL
Mt. Pinos onion <i>Allium howellii</i> var. <i>clokeyi</i>	PMLIL02161	None	None	G4T2	S2	1B.3
Northern California legless lizard <i>Anniella pulchra</i>	ARACC01020	None	None	G3	S3	SSC
pale-yellow layia <i>Layia heterotricha</i>	PDAST5N070	None	None	G2	S2	1B.1
Palmer's mariposa-lily <i>Calochortus palmeri</i> var. <i>palmeri</i>	PMLIL0D122	None	None	G3T2	S2	1B.2
Piute cypress <i>Hesperocyparis nevadensis</i>	PGCUP04012	None	None	G2	S2	1B.2
Piute Mountains jewelflower <i>Streptanthus cordatus</i> var. <i>piutensis</i>	PDBRA2G0D2	None	None	G5T1	S1	1B.2
Piute Mountains navarretia <i>Navarretia setiloba</i>	PDPLM0C0S0	None	None	G2	S2	1B.1
Piute Mountains triteleia <i>Triteleia piutensis</i>	PMLIL210H0	None	None	G1	S1	1B.1
prairie falcon <i>Falco mexicanus</i>	ABNKD06090	None	None	G5	S4	WL
sagebrush loeflingia <i>Loeflingia squarrosa</i> var. <i>artemisiarum</i>	PDCAR0E011	None	None	G5T3	S2	2B.2
San Joaquin adobe sunburst <i>Pseudobahia peirsonii</i>	PDAST7P030	Threatened	Endangered	G1	S1	1B.1
San Joaquin pocket mouse <i>Perognathus inornatus</i>	AMAFD01060	None	None	G2G3	S2S3	
Southern California legless lizard <i>Anniella stebbinsi</i>	ARACC01060	None	None	G3	S3	SSC
Southern Interior Cypress Forest <i>Southern Interior Cypress Forest</i>	CTT83230CA	None	None	G2	S2.1	
Spanish Needle onion <i>Allium shevockii</i>	PMLIL022M0	None	None	G2	S2	1B.3
Swainson's hawk <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S3	
Tehachapi monardella <i>Monardella linoides</i> ssp. <i>oblonga</i>	PDLAM180D2	None	None	G5T2	S2	1B.3
Tehachapi Mountain silverspot butterfly <i>Speyeria egleis tehachapina</i>	IILEPJ6105	None	None	G5T2	S2	



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Tehachapi pocket mouse <i>Perognathus alticola inexpectatus</i>	AMAFD01082	None	None	G2T1T2	S1S2	SSC
Tehachapi slender salamander <i>Batrachoseps stebbinsi</i>	AAAAD02090	None	Threatened	G2	S2S3	
Tejon poppy <i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>	PDPAP0A071	None	None	G5T2	S2	1B.1
Tracy's eriastrum <i>Eriastrum tracyi</i>	PDPLM030C0	None	Rare	G3Q	S3	3.2
tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>	AMAFF06021	None	None	G5T1T2	S1S2	SSC
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	IICOL48011	Threatened	None	G3T2	S3	
whitefir shoulderband <i>Helminthoglypta concolor</i>	IMGASC2540	None	None	G1G2	S1S2	
yellow-blotched salamander <i>Ensatina eschscholtzii croceater</i>	AAAAD04011	None	None	G5T3	S3	WL

Record Count: 48



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Tehachapi South (3511814) OR Keene (3511825) OR Tehachapi North (3511824) OR Tehachapi NE (3511823) OR Cummings Mtn. (3511815) OR Liebre Twins (3411885) OR Tylerhorse Canyon (3411884) OR Willow Springs (3411883) OR Monolith (3511813))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alkali mariposa-lily <i>Calochortus striatus</i>	PMLIL0D190	None	None	G3?	S2S3	1B.2
American badger <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
aparejo grass <i>Muhlenbergia utilis</i>	PMPOA481X0	None	None	G4	S2S3	2B.2
Baja navarretia <i>Navarretia peninsularis</i>	PDPLM0C0L0	None	None	G3	S2	1B.2
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
calico monkeyflower <i>Diplacus pictus</i>	PDSCR1B240	None	None	G2	S2	1B.2
California condor <i>Gymnogyps californianus</i>	ABNKA03010	Endangered	Endangered	G1	S1	FP
California legless lizard <i>Anniella spp.</i>	ARACC01070	None	None	G3G4	S3S4	SSC
coast horned lizard <i>Phrynosoma blainvillii</i>	ARACF12100	None	None	G3G4	S3S4	SSC
Comstock's blue butterfly <i>Euphilotes glaucon comstocki</i>	IILEPG201A	None	None	G5T2	S2	
Coulter's goldfields <i>Lasthenia glabrata ssp. coulteri</i>	PDAST5L0A1	None	None	G4T2	S2	1B.1
Crotch bumble bee <i>Bombus crotchii</i>	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
desert tortoise <i>Gopherus agassizii</i>	ARAAF01012	Threatened	Threatened	G3	S2S3	
ferruginous hawk <i>Buteo regalis</i>	ABNKC19120	None	None	G4	S3S4	WL
foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050	None	Endangered	G3	S3	SSC
golden eagle <i>Aquila chrysaetos</i>	ABNKC22010	None	None	G5	S3	FP
grey-leaved violet <i>Viola pinetorum ssp. grisea</i>	PDVIO04431	None	None	G4G5T3	S3	1B.2
Horn's milk-vetch <i>Astragalus hornii var. hornii</i>	PDFAB0F421	None	None	GUT1	S1	1B.1



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Latimer's woodland-gilia <i>Saltugilia latimeri</i>	PDPLM0H010	None	None	G3	S3	1B.2
Le Conte's thrasher <i>Toxostoma lecontei</i>	ABPBK06100	None	None	G4	S3	SSC
loggerhead shrike <i>Lanius ludovicianus</i>	ABPBR01030	None	None	G4	S4	SSC
Madera leptosiphon <i>Leptosiphon serrulatus</i>	PDPLM09130	None	None	G3	S3	1B.2
merlin <i>Falco columbarius</i>	ABNKD06030	None	None	G5	S3S4	WL
Mohave shoulderband <i>Helminthoglypta greggi</i>	IMGASC2270	None	None	G1	S1	
Mt. Pinos onion <i>Allium howellii</i> var. <i>clokeyi</i>	PMLIL02161	None	None	G4T2	S2	1B.3
Northern California legless lizard <i>Anniella pulchra</i>	ARACC01020	None	None	G3	S3	SSC
pale-yellow layia <i>Layia heterotricha</i>	PDAST5N070	None	None	G2	S2	1B.1
Palmer's mariposa-lily <i>Calochortus palmeri</i> var. <i>palmeri</i>	PMLIL0D122	None	None	G3T2	S2	1B.2
Piute Mountains triteleia <i>Triteleia piutensis</i>	PMLIL210H0	None	None	G1	S1	1B.1
prairie falcon <i>Falco mexicanus</i>	ABNKD06090	None	None	G5	S4	WL
sagebrush loeflingia <i>Loeflingia squarrosa</i> var. <i>artemisiarum</i>	PDCAR0E011	None	None	G5T3	S2	2B.2
San Joaquin pocket mouse <i>Perognathus inornatus</i>	AMAFD01060	None	None	G2G3	S2S3	
Spanish Needle onion <i>Allium shevockii</i>	PMLIL022M0	None	None	G2	S2	1B.3
Swainson's hawk <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S3	
Tehachapi monardella <i>Monardella linoides</i> ssp. <i>oblonga</i>	PDLAM180D2	None	None	G5T2	S2	1B.3
Tehachapi Mountain silverspot butterfly <i>Speyeria egleis tehachapina</i>	IILEPJ6105	None	None	G5T2	S2	
Tehachapi pocket mouse <i>Perognathus alticola inexpectatus</i>	AMAFD01082	None	None	G2T1T2	S1S2	SSC
Tehachapi slender salamander <i>Batrachoseps stebbinsi</i>	AAAAD02090	None	Threatened	G2	S2S3	
Tejon poppy <i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>	PDPAP0A071	None	None	G5T2	S2	1B.1



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Tracy's eriastrum <i>Eriastrum tracyi</i>	PDPLM030C0	None	Rare	G3Q	S3	3.2
tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>	AMAFF06021	None	None	G5T1T2	S1S2	SSC
whitefir shoulderband <i>Helminthoglypta concolor</i>	IMGASC2540	None	None	G1G2	S1S2	
yellow-blotched salamander <i>Ensatina eschscholtzii croceater</i>	AAAAD04011	None	None	G5T3	S3	WL

Record Count: 44



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Plant List

39 matches found. [Click on scientific name for details](#)

Search Criteria

Found in Quads 3511835, 3511834, 3511833, 3511825, 3511824, 3511823, 3511815 3511814 and 3511813;

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium howellii var. clokeyi	Mt. Pinos onion	Alliaceae	perennial bulbiferous herb	Apr-Jun	1B.3	S2	G4T2
Allium howellii var. howellii	Howell's onion	Alliaceae	perennial bulbiferous herb	Mar-Apr	4.3	S3	G3G4T3
Allium shevockii	Spanish Needle onion	Alliaceae	perennial bulbiferous herb	May-Jun	1B.3	S2	G2
Amsinckia douglasiana	Douglas' fiddleneck	Boraginaceae	annual herb	Mar-May	4.2	S4	G4
Calochortus palmeri var. palmeri	Palmer's mariposa lily	Liliaceae	perennial bulbiferous herb	Apr-Jul	1B.2	S2	G3T2
Chorizanthe leptotheca	Peninsular spineflower	Polygonaceae	annual herb	May-Aug	4.2	S3	G3
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3
Cordylanthus rigidus ssp. brevibracteatus	short-bracted bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jul-Aug(Oct)	4.3	S3	G5T3
Delphinium gypsophilum ssp. parviflorum	small-flowered gypsum-loving larkspur	Ranunculaceae	perennial herb	(Mar)Apr-Jun	3.2	S2S3	G4T2T3Q
Delphinium parryi ssp. purpureum	Mt. Pinos larkspur	Ranunculaceae	perennial herb	May-Jun	4.3	S4	G4T4
Diplacus pictus	calico monkeyflower	Phrymaceae	annual herb	Mar-May	1B.2	S2	G2
Dudleya abramsii ssp. calcicola	limestone dudleya	Crassulaceae	perennial herb	Apr-Aug	4.3	S4	G4T4
Eriastrum tracyi	Tracy's eriastrum	Polemoniaceae	annual herb	May-Jul	3.2	S3	G3Q
Eriogonum kennedyi var. pinicola	Kern buckwheat	Polygonaceae	perennial herb	May-Jun(Jul)	1B.1	S1	G4T1
Erythranthe sierrae	Sierra Nevada monkeyflower	Phrymaceae	annual herb	Mar-Jul	4.2	S2	G2

<u>Eschscholzia lemmonii ssp. kernensis</u>	Tejon poppy	Papaveraceae	annual herb	(Feb)Mar-May	1B.1	S2	G5T2
<u>Eschscholzia procera</u>	Kernville poppy	Papaveraceae	perennial herb	Jun-Jul(Aug)	3	S1?	G1?Q
<u>Fritillaria brandegeei</u>	Greenhorn fritillary	Liliaceae	perennial bulbiferous herb	Apr-Jun	1B.3	S2S3	G2G3
<u>Fritillaria pinetorum</u>	pine fritillary	Liliaceae	perennial bulbiferous herb	May-Jul(Sep)	4.3	S4	G4
<u>Hesperocyparis nevadensis</u>	Piute cypress	Cupressaceae	perennial evergreen tree		1B.2	S2	G2
<u>Lasthenia glabrata ssp. coulteri</u>	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	1B.1	S2	G4T2
<u>Layia heterotricha</u>	pale-yellow layia	Asteraceae	annual herb	Mar-Jun	1B.1	S2	G2
<u>Loeflingia squarrosa var. artemisiarum</u>	sagebrush loeflingia	Caryophyllaceae	annual herb	Apr-May	2B.2	S2	G5T3
<u>Microseris sylvatica</u>	sylvan microseris	Asteraceae	perennial herb	Mar-Jun	4.2	S4	G4
<u>Monardella linoides ssp. oblonga</u>	Tehachapi monardella	Lamiaceae	perennial rhizomatous herb	(May)Jun-Aug	1B.3	S2	G5T2
<u>Navarretia peninsularis</u>	Baja navarretia	Polemoniaceae	annual herb	(May)Jun-Aug	1B.2	S2	G3
<u>Navarretia setiloba</u>	Piute Mountains navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G2
<u>Nemacladus secundiflorus var. secundiflorus</u>	large-flowered nemacladus	Campanulaceae	annual herb	Apr-Jun	4.3	S3?	G3T3?
<u>Opuntia basilaris var. treleasei</u>	Bakersfield cactus	Cactaceae	perennial stem succulent	Apr-May	1B.1	S1	G5T1
<u>Orthotrichum spjutii</u>	Spjut's bristle moss	Orthotrichaceae	moss		1B.3	S1	G1
<u>Pentachaeta fragilis</u>	fragile pentachaeta	Asteraceae	annual herb	Mar-Jun	4.3	S3	G3
<u>Perideridia pringlei</u>	adobe yampah	Apiaceae	perennial herb	Apr-Jun(Jul)	4.3	S4	G4
<u>Pseudobahia peirsonii</u>	San Joaquin adobe sunburst	Asteraceae	annual herb	Feb-Apr	1B.1	S1	G1
<u>Ribes menziesii var. ixoderme</u>	aromatic canyon gooseberry	Grossulariaceae	perennial deciduous shrub	Apr	1B.2	S1	G4T1
<u>Saltugilia latimeri</u>	Latimer's woodland-gilia	Polemoniaceae	annual herb	Mar-Jun	1B.2	S3	G3
<u>Streptanthus cordatus var. piutensis</u>	Piute Mountains jewelflower	Brassicaceae	perennial herb	May-Jul	1B.2	S1	G5T1
<u>Syntrichopappus lemmonii</u>	Lemmon's syntrichopappus	Asteraceae	annual herb	Apr-May(Jun)	4.3	S4	G4
<u>Triteleia piutensis</u>	Piute Mountains triteleia	Themidaceae	perennial bulbiferous herb	May-Jun	1B.1	S1	G1
<u>Viola pinetorum ssp. grisea</u>	grey-leaved violet	Violaceae	perennial herb	Apr-Jul	1B.2	S3	G4G5T3

Suggested Citation

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Plant List

34 matches found. [Click on scientific name for details](#)

Search Criteria

Found in Quads 3511825, 3511824, 3511823, 3511815, 3511814, 3511813, 3411885 3411884 and 3411883;

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Allium howellii var. clokeyi	Mt. Pinos onion	Alliaceae	perennial bulbiferous herb	Apr-Jun	1B.3	S2	G4T2
Allium howellii var. howellii	Howell's onion	Alliaceae	perennial bulbiferous herb	Mar-Apr	4.3	S3	G3G4T3
Allium shevockii	Spanish Needle onion	Alliaceae	perennial bulbiferous herb	May-Jun	1B.3	S2	G2
Amsinckia douglasiana	Douglas' fiddleneck	Boraginaceae	annual herb	Mar-May	4.2	S4	G4
Astragalus hornii var. hornii	Horn's milk-vetch	Fabaceae	annual herb	May-Oct	1B.1	S1	G4G5T1T2
Calochortus palmeri var. palmeri	Palmer's mariposa lily	Liliaceae	perennial bulbiferous herb	Apr-Jul	1B.2	S2	G3T2
Calochortus striatus	alkali mariposa lily	Liliaceae	perennial bulbiferous herb	Apr-Jun	1B.2	S2S3	G3?
Calystegia peirsonii	Peirson's morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jun	4.2	S4	G4
Chorizanthe leptotheca	Peninsular spineflower	Polygonaceae	annual herb	May-Aug	4.2	S3	G3
Cordylanthus rigidus ssp. brevibracteatus	short-bracted bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jul-Aug(Oct)	4.3	S3	G5T3
Delphinium parryi ssp. purpureum	Mt. Pinos larkspur	Ranunculaceae	perennial herb	May-Jun	4.3	S4	G4T4
Diplacus pictus	calico monkeyflower	Phrymaceae	annual herb	Mar-May	1B.2	S2	G2
Eriastrum tracyi	Tracy's eriastrum	Polemoniaceae	annual herb	May-Jul	3.2	S3	G3Q
Eriogonum kennedyi var. pinicola	Kern buckwheat	Polygonaceae	perennial herb	May-Jun(Jul)	1B.1	S1	G4T1
Erythranthe sierrae	Sierra Nevada monkeyflower	Phrymaceae	annual herb	Mar-Jul	4.2	S2	G2
Eschscholzia lemmonii ssp. kernensis	Tejon poppy	Papaveraceae	annual herb	(Feb)Mar-May	1B.1	S2	G5T2

<u>Eschscholzia procera</u>	Kernville poppy	Papaveraceae	perennial herb	Jun-Jul(Aug)	3	S1?	G1?Q
<u>Fritillaria brandegeei</u>	Greenhorn fritillary	Liliaceae	perennial bulbiferous herb	Apr-Jun	1B.3	S2S3	G2G3
<u>Fritillaria pinetorum</u>	pine fritillary	Liliaceae	perennial bulbiferous herb	May-Jul(Sep)	4.3	S4	G4
<u>Lasthenia glabrata ssp. coulteri</u>	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	1B.1	S2	G4T2
<u>Layia heterotricha</u>	pale-yellow layia	Asteraceae	annual herb	Mar-Jun	1B.1	S2	G2
<u>Loeflingia squarrosa var. artemisiarum</u>	sagebrush loeflingia	Caryophyllaceae	annual herb	Apr-May	2B.2	S2	G5T3
<u>Monardella linoides ssp. oblonga</u>	Tehachapi monardella	Lamiaceae	perennial rhizomatous herb	(May)Jun-Aug	1B.3	S2	G5T2
<u>Navarretia peninsularis</u>	Baja navarretia	Polemoniaceae	annual herb	(May)Jun-Aug	1B.2	S2	G3
<u>Navarretia setiloba</u>	Piute Mountains navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G2
<u>Nemacladus secundiflorus var. secundiflorus</u>	large-flowered nemacladus	Campanulaceae	annual herb	Apr-Jun	4.3	S3?	G3T3?
<u>Orthotrichum spjutii</u>	Spjut's bristle moss	Orthotrichaceae	moss		1B.3	S1	G1
<u>Perideridia pringlei</u>	adobe yampah	Apiaceae	perennial herb	Apr-Jun(Jul)	4.3	S4	G4
<u>Saltugilia latimeri</u>	Latimer's woodland-gilia	Polemoniaceae	annual herb	Mar-Jun	1B.2	S3	G3
<u>Senecio astephanus</u>	San Gabriel ragwort	Asteraceae	perennial herb	May-Jul	4.3	S3	G3
<u>Streptanthus cordatus var. piutensis</u>	Piute Mountains jewelflower	Brassicaceae	perennial herb	May-Jul	1B.2	S1	G5T1
<u>Syntrichopappus lemmonii</u>	Lemmon's syntrichopappus	Asteraceae	annual herb	Apr-May(Jun)	4.3	S4	G4
<u>Triteleia piutensis</u>	Piute Mountains triteleia	Themidaceae	perennial bulbiferous herb	May-Jun	1B.1	S1	G1
<u>Viola pinetorum ssp. grisea</u>	grey-leaved violet	Violaceae	perennial herb	Apr-Jul	1B.2	S3	G4G5T3

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Questions and Comments

rareplants@cnps.org

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Kern County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📠 (916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Fisher Pekania pennanti

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3651>

Birds

NAME	STATUS
California Condor <i>Gymnogyps californianus</i> There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8193	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard <i>Gambelia silus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/625	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2891	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Golden Eagle *Aquila chrysaetos*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Lawrence's Goldfinch *Carduelis lawrencei*

Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9464>

Nuttall's Woodpecker *Picoides nuttallii*

Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9410>

Oak Titmouse *Baeolophus inornatus*

Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9656>

Song Sparrow *Melospiza melodia*

Breeds Feb 20 to Sep 5

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project

intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER POND

[PUBHx](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Kern County, California



Local office

Carlsbad Fish And Wildlife Office

☎ (760) 431-9440

📠 (760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

<http://www.fws.gov/carlsbad/>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Fisher *Pekania pennanti*

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3651>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Golden Eagle *Aquila chrysaetos*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Lawrence's Goldfinch *Carduelis lawrencei*

Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9464>

Nuttall's Woodpecker *Picoides nuttallii*

Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9410>

Oak Titmouse *Baeolophus inornatus*

Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9656>

Song Sparrow *Melospiza melodia*

Breeds Feb 20 to Sep 5

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
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Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

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What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

[R4SBJ](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Kern County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📠 (916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Fisher *Pekania pennanti*

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3651>

Birds

NAME	STATUS
California Condor <i>Gymnogyps californianus</i> There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8193	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard <i>Gambelia silus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/625	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2891	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Common Yellowthroat *Geothlypis trichas sinuosa*

Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/2084>

Costa's Hummingbird <i>Calypte costae</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9470	Breeds Jan 15 to Jun 10
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Lewis's Woodpecker <i>Melanerpes lewis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Nuttall's Woodpecker <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Rufous Hummingbird <i>selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Song Sparrow <i>Melospiza melodia</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5
Spotted Towhee <i>Pipilo maculatus clementae</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243	Breeds Apr 15 to Jul 20

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

White Headed Woodpecker *Picoides albolarvatus*

Breeds May 1 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9411>

Wrentit *Chamaea fasciata*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting

point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1K](#)

FRESHWATER POND

[PUSK](#)

[PUBK](#)

RIVERINE

[R4SBJx](#)[R4SBJ](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix C

Potential to Occur Tables

TABLE 1
SPECIAL-STATUS PLANT SPECIES

Common Name Scientific Name	Sensitivity Status ^a	Blooming Period	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
Asteraceae				
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	--/--/1B.1	February–June	Marshes and swamps (coastal salt), playas, and vernal pools.	Absent/Not Expected. Species has been observed within the vicinity of the WWTP; however, occurrences are outdated and site is completely disturbed where occurrences were documented..
Pale-yellow layia <i>Layia heterotricha</i>	--/--/1B.1	March–June	Cismontane and pinyon and juniper woodland, coastal scrub, and valley and foothill grassland with alkaline or clay soils.	Absent/Not Expected. Species has been observed within the vicinity of the WWTP; however, occurrences are outdated and site is completely disturbed where occurrences were documented.
San Joaquin adobe sunburst <i>Pseudobahia peirsonii</i>	FT/SE/1B.1	February–April	Cismontane woodland and valley and foothill grassland in adobe clay.	Low Potential. Suitable habitat for this species occurs in the non-native herbaceous cover within the biological study area but is marginal at best; additionally, soil requirements are inappropriate and there are no known occurrences within the vicinity of the biological study area.
Brassicaceae				
Piute Mountains jewelflower <i>Streptanthus cordatus</i> var. <i>piutensis</i>	--/--/1B.2	May–July	Broadleafed upland forest, closed-cone coniferous forest, and pinyon and juniper woodland in clay or metamorphic soils.	Absent/Not Expected. Suitable habitat and soil for this species is not present within the biological study area. Any areas that may have historically supported habitat for this species have been sufficiently altered through legal development to a point at which they no longer do.
Cactaceae				
Bakersfield cactus <i>Opuntia basilaris</i> var. <i>treleasei</i>	FE/SE/1B.1	April–May	Chenopod scrub, cismontane woodland, and valley and foothill grassland in sandy or gravelly soils.	Low Potential. Suitable habitat and soils for this species occurs within the non-native herbaceous cover in the biological study area but is marginal at best; additionally, there are no known occurrences within the vicinity of the biological study area.

Common Name Scientific Name	Sensitivity Status ^a	Blooming Period	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
Caryophyllaceae				
Sagebrush loeflingia <i>Loeflingia squarrosa</i> var. <i>artemisiarum</i>	--/--/2B.2	April–May	Desert dunes, Great Basin scrub, and Sonoran desert scrub in sandy soils.	Absent/Not Expected. Suitable habitat for this species is not present within the biological study area. Any areas that may have historically supported habitat for this species have been sufficiently altered through legal development to a point at which they no longer do.
Fabaceae				
Horn's milk vetch <i>Astragalus hornii</i> var. <i>hornii</i>	--/--/1B.1	May–October	Alkali playa, meadow and seep, and wetland.	Absent/Not Expected. Suitable habitat for this species is not present within the biological study area. Any areas that may have historically supported habitat for this species have been sufficiently altered through legal development to a point at which they no longer do.
Grossulariaceae				
Aromatic canyon gooseberry <i>Ribes menziesii</i> var. <i>ixoderme</i>	--/--/1B.2	April	Chaparral and cismontane woodland.	Low Potential. Suitable habitat for this species occurs in the shrublands within the biological study area but is marginal at best; additionally, there are no known occurrences within the vicinity of the biological study area.
Lamiaceae				
Tehachapi monardella <i>Monardella linoides</i> ssp. <i>oblonga</i>	--/--/1B.3	(May) June–August	Lower and upper montane coniferous forest and pinyon and juniper woodland.	Absent/Not Expected. Species has been observed within the vicinity of the WWTP; however, occurrences are outdated and biological study area is completely disturbed where occurrences were documented.
Papaveraceae				
Tejon poppy <i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>	--/--/1B.1	(February) March–May	Chenopod scrub and valley and foothill grassland.	Low Potential. Suitable habitat for this species occurs in the non-native herbaceous cover within the biological study area but is marginal at best; additionally, there are no known occurrences within the vicinity of the biological study area.

Common Name Scientific Name	Sensitivity Status ^a	Blooming Period	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
Phrymaceae				
Calico monkeyflower <i>Diplacus pictus</i>	--/--/1B.2	March–May	Broadleafed upland forest and cismontane woodland in disturbed areas with granitic soils.	Absent/Not Expected. Species has been observed within the vicinity of the WWTP; however, occurrences are outdated and site is completely disturbed where occurrences were documented.
Polemoniaceae				
Tracy's eriastrum <i>Eriastrum tracyi</i>	--/SR/3.2	May–July	Chaparral, cismontane woodland, and valley and foothill grassland.	Low Potential. Species has been observed within the vicinity of the WWTP and habitat is present within the shrublands and non-native herbaceous cover in the biological study area; however, the single occurrence documented in the CNDDDB is a historic occurrence from 1910.
Madera leptosiphon <i>Leptosiphon serrulatus</i>	--/--/1B.2	April–May	Cismontane woodland and lower montane coniferous forest.	Absent/Not Expected. Suitable habitat for this species is not present within the biological study area. Any areas that may have historically supported habitat for this species have been sufficiently altered through legal development to a point at which they no longer do.
Baja navarretia <i>Navarretia peninsularis</i>	--/--/1B.2	(May) June–August	Chaparral openings, lower montane coniferous forest, meadows and seeps, and pinyon and juniper woodland in mesic soils.	Low Potential. Suitable habitat for this species occurs in the shrublands within the biological study area but is marginal at best; additionally, soil requirements are inappropriate and there are no known occurrences within the vicinity of the biological study area.
Piute Mountains navarretia <i>Navarretia setiloba</i>	--/--/1B.1	April–July	Cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland in clay or gravelly loam soils.	Low Potential. Suitable habitat for this species occurs in the non-native herbaceous cover within the biological study area but is marginal at best; additionally, soil requirements are inappropriate and there are no known occurrences within the vicinity of the biological study area.
Latimer's woodland-gilia <i>Saltugilia latimeri</i>	--/--/1B.2	March–June	Chaparral, Mojavean desert scrub, and pinyon and juniper woodland in rocky or sandy soils.	Low Potential. Suitable habitat and soils for this species occurs in the shrublands within the biological study area but is marginal at best;

Common Name Scientific Name	Sensitivity Status ^a	Blooming Period	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
				additionally, there are no known occurrences within the vicinity of the biological study area.
Polygonaceae				
Kern buckwheat <i>Eriogonum kennedyi</i> var. <i>pinicola</i>	--/--/1B.1	May–June (July)	Chaparral and pinyon and juniper woodland in clay soils.	Low Potential. Suitable habitat for this species occurs in the shrublands within biological study area but is marginal at best; additionally, soil requirements are inappropriate and there are no known occurrences within the vicinity of the biological study area.
Violaceae				
Grey-leaved violet <i>Viola pinetorum</i> ssp. <i>grisea</i>	--/--/1B.2	April–July	Meadows and seeps, subalpine coniferous forest, and upper montane coniferous forest.	Absent/Not Expected. Suitable habitat for this species is not present within the biological study area. Any areas that may have historically supported habitat for this species have been sufficiently altered through legal development to a point at which they no longer do.
Alliaceae				
Mt. Pinos onion <i>Allium howellii</i> var. <i>clokeyi</i>	--/--/1B.3	April–June	Great Basin scrub, edges of meadows and seeps, and pinyon and juniper woodland.	Absent/Not Expected. Species has been observed within the vicinity of the WWTP; however, occurrences are outdated and site is completely disturbed where occurrences were documented.
Spanish needle onion <i>Allium shevockii</i>	--/--/1B.3	May–June	Pinyon and juniper woodland and upper montane coniferous forest in rocky soils.	Absent/Not Expected. Suitable habitat for this species is not present within the biological study area. Any areas that may have historically supported habitat for this species have been sufficiently altered through legal development to a point at which they no longer do.
Liliaceae				
Alkali mariposa-lily <i>Calochortus striatus</i>	--/--/1B.2	April–June	Chaparral, chenopod scrub, meadow and seep, Mojavean desert scrub, and wetland.	Low Potential. Suitable habitat for this species occurs in the shrublands within biological study area but is marginal at best; additionally, there are no known occurrences within the vicinity of the biological study area.

Common Name Scientific Name	Sensitivity Status ^a	Blooming Period	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
Greenhorn fritillary <i>Fritillaria brandegeei</i>	--/--/1B.3	April–June	Lower montane coniferous forest in granitic soils.	Absent/Not Expected. Suitable habitat for this species is not present within the biological study area. Any areas that may have historically supported habitat for this species have been sufficiently altered through legal development to a point at which they no longer do.
Palmer's mariposa-lily <i>Calochortus palmeri</i> var. <i>palmeri</i>	--/--/1B.2	April–July	Chaparral, lower montane coniferous forest, and meadows and seeps in mesic soil.	Low Potential. Species has been observed within the vicinity of the WWTP and habitat is present in the shrublands; however, the nearest occurrence documented in the CNDDDB is a historic occurrence from 1889. Three other more recent occurrences are documented in the CNDDDB from 1995, but these occurrences are all more than 8 miles to the northeast..
Poaceae				
Aparejo grass <i>Muhlenbergia utilis</i>	--/--/2B.2	October–May	Chaparral, cismontane woodland, coastal scrub, marsh and swamp, meadow and seep, and ultramafic.	Low Potential. Suitable habitat for this species occurs in the shrublands within biological study area but is marginal at best; additionally, there are no known occurrences within the vicinity of the biological study area.
Themidaceae				
Piute Mountains triteleia <i>Triteleia piutensis</i>	--/--/1B.1	May–June	Openings in pinyon and juniper woodland with fine volcanic soil throughout scattered boulders or heavy clay soil with volcanic hardpan.	Absent/Not Expected. Suitable habitat for this species is not present within the biological study area. Any areas that may have historically supported habitat for this species have been sufficiently altered through legal development to a point at which they no longer do.

NOTES:

^a Status (Federal/State): FE-federally endangered; FT-federally threatened; SE-state endangered; SR-state rare species.

Status (CNPS): List 1B = Plants Rare, Threatened, endangered in California and elsewhere, List 2 = Plants Rare, Threatened, or, Endangered in California, But More Common Elsewhere, List 4 = Plants of Limited Distribution - A Watch List. Threat ranks .1 = seriously Endangered in California, .2 = fairly Endangered in California, .3 = Not very threatened in California (low degree/immediacy of threats or no current threats known).

SOURCE: CDFW, 2021

TABLE 2
SPECIAL-STATUS WILDLIFE SPECIES

Common Name Scientific Name	Sensitivity Status	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
Invertebrates			
Crotch bumble bee <i>Bombus crotchii</i>	--/CE	Open grassland and scrub, Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	Moderate Potential. Habitat requirements are present in the biological study area and multiple detections have been recorded within the vicinity of the biological study area on CNDDDB between 1956-2017.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT/--	Riparian scrub.	Absent/Not Expected. Habitat requirements not present in biological study area.
Amphibians			
Foothill yellow-legged frog <i>Rana boylei</i>	--/SE	Aquatic, chaparral, cismontane woodland, coastal scrub, Klamath/North coast flowing waters, lower montane coniferous forest, meadow and seep, riparian forest and woodland, and Sacramento/San Joaquin flowing waters.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.
Tehachapi slender salamander <i>Batrachoseps stebbinsi</i>	--/ST	Cismontane and riparian woodland.	Absent/Not Expected. Habitat requirements not present in biological study area.
Reptiles			
Blunt-nosed leopard lizard <i>Gambelia silus</i>	FE/SE	San Joaquin Valley and adjacent foothills within open, sparsely vegetated areas of low relief, alkali playa and valley saltbush scrub in small rodent burrows.	Absent/Not Expected. Habitat requirements not present in biological study area.
California legless lizard <i>Anniella spp.</i>	--/SSC	Coastal dune, valley and foothill grassland, chaparral, and coastal scrub in sandy soils.	Moderate Potential. Habitat and soil requirements are present in the biological study area and two historic detections in 1950 and 1955 have been recorded within the vicinity of the biological study area on CNDDDB.
California red-legged frog <i>Rana draytonii</i>	FT/SSC	Aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons.	Low Potential. Habitat requirements present within the ponds in the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.
Coast horned lizard <i>Phrynosoma blainvillii</i>	--/SSC	Chaparral, cismontane woodland, coastal bluff scrub, coastal scrub, desert wash, pinyon & juniper woodlands,	Moderate Potential. Habitat requirements are present in the biological study area and multiple detections have

Common Name Scientific Name	Sensitivity Status	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
		riparian scrub, riparian woodland, and valley and foothill grassland.	been recorded within the vicinity of the biological study area on CNDDDB in 2010.
Desert tortoise <i>Gopherus agassizii</i>	FT/ST	Joshua tree woodland, Mojavean desert scrub, and Sonoran desert scrub.	Absent/Not Expected. Habitat requirements not present in biological study area.
Northern California legless lizard <i>Anniella pulchra</i>	--/SSC	Chaparral, coastal dunes, and coastal scrub.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.
Southern California legless lizard <i>Anniella stebbinsi</i>	--/SSC	Broadleaved upland forest, chaparral, coastal dunes, and coastal scrub.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.
Birds			
Bendire's thrasher <i>Toxostoma bendirei</i>	--/SSC	Joshua tree woodland and Mojavean desert scrub.	Absent/Not Expected. Habitat requirements not present in biological study area.
Burrowing owl <i>Athene cunicularia</i>	--/SSC	Coastal prairie and scrub, Great Basin grassland and scrub, Mojavean desert scrub, Sonoran desert scrub, and valley and foothill grassland.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area. Two occurrences are documented in the CNDDDB from 2005 and 2009, but these occurrences are both more than 8 miles to the southeast. Additionally, a burrowing owl habitat assessment was conducted and resulted in two potential burrows but poor habitat.
California condor <i>Gymnogyps californianus</i>	FE/SE	Chaparral and valley and foothill grassland. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area in the CNDDDB. Two eBird occurrences documented groups of this species foraging in an urbanized area approximately 0.5 mile southeast of the WWTP in 2015 and 2019 (eBird), so this species has a moderate potential to forage within the BSA.
Golden eagle <i>Aquila chrysaetos</i>	--/FP	Broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland and scrub, upper and lower montane coniferous forest, pinyon and juniper woodlands, and valley and foothill grassland. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Moderate Potential. Habitat requirements are present in the biological study area and multiple detections have been recorded within the vicinity of the biological study area on CNDDDB; however, the last documented historic occurrences were in 1941 and 1949. A number of eBird observations of golden eagle have been observed within the vicinity, including one observation in 2012 of a golden

Common Name Scientific Name	Sensitivity Status	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
			eagle observed approximately 0.75 mile east of the WWTP ponds (eBird 2021), so this species has a moderate potential to forage within the BSA.
Le Conte's thrasher <i>Toxostoma lecontei</i>	--/SSC	Desert wash, Mojavean desert scrub, and Sonoran desert scrub.	Absent/Not Expected. Habitat requirements not present in biological study area.
Loggerhead shrike <i>Lanius ludovicianus</i>	--/SSC	Broadleaved upland forest, desert wash, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodlands, riparian woodland, and Sonoran desert scrub.	Moderate Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area in the CNDDDB. This species has been documented numerous times in eBird at the WWTP and Borrow Pit (eBird 2021).
Swainson's hawk <i>Buteo swainsoni</i>	--/ST	Great Basin grassland, riparian forest and woodland, and valley and foothill grassland.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.
Tricolored blackbird <i>Agelaius tricolor</i>	--/ST	Freshwater marsh, marsh, swamp, and wetland.	Moderate Potential. Habitat requirements are present in the biological study area and multiple detections have been recorded within the vicinity of the WWTP on CNDDDB; however, the last documented occurrences were in 1992 and 2008. More recent observation have also been documented in eBird in 2019 by the WWTP and in 2014 by the Borrow Pit (eBird 2021).
Mammals			
American badger <i>Taxidea taxus</i>	--/SSC	Alkali marsh and playa, alpine, alpine dwarf scrub, bog and fen, freshwater and brackish marsh, broadleaved upland forest, chaparral, chenopod scrub, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, desert dunes and wash, Great Basin grassland and scrub, Interior dunes, lone formation, Joshua tree woodland, limestone, upper and lower montane coniferous forest, marsh and swamp, meadow and seep, Mojavean desert scrub, montane dwarf scrub, north coast coniferous forest, old growth, pavement plain, redwood, Riparian forest, Riparian scrub, Riparian woodland, salt marsh, Sonoran desert scrub and thorn woodland, ultramafic, upper Sonoran scrub, and valley and foothill grassland.	Low Potential. Habitat requirements present within the biological study area; however, no occurrences have been documented in the vicinity of the biological study area.

Common Name Scientific Name	Sensitivity Status	Preferred Habitat	Presence/Potential to Occur Within Biological Study Area
Fisher <i>Pekania pennanti</i>	FE/SSC	Forests.	Absent/Not Expected. Habitat requirements not present in biological study area.
Tehachapi pocket mouse <i>Perognathus alticola inexpectatus</i>	--/SSC	Chaparral, Joshua tree woodland, and valley and foothill grassland.	Moderate Potential. Habitat requirements are present in the biological study area and multiple detections have been recorded within the vicinity of the biological study area on CNDDDB; however, the last documented occurrences were in 1959 and 1972.
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>	--/SSC	Chenopod scrub.	Absent/Not Expected. Habitat requirements not present in biological study area..

NOTES:

^a Status (Federal/State): FE-federally endangered; FT-federally threatened; BCC-federal bird of conservation concern; SE-state endangered; CE-state candidate endangered; SA-state special animal; SSC-state species of special concern; FP-state fully protected; WL-state watch list.

SOURCE: CDFW, 2021, USFWS, 2021

Appendix Energy

Energy Calculations

Energy.1: Assumptions

Project Land Uses

Land Use Type	CalEEMod LandUse Type	CalEEMod LandUse Subtype	Amount	Unit	Building sq.ft.	Acreage
Conveyance Facilities	Parking	Other Non-Asphalt Surface	13.06	1000sqft	13,060	0.30
Pump station (borrow pit)	Parking	Other Non-Asphalt Surface	2.5	1000sqft	2,500	0.06
Pipeline	Parking	Other Non-Asphalt Surface	10.56	1000sqft	10,560	0.24
Total					13,060	

PD

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pg 1-1

Construction Schedule - Overview

Start	End	Total Duration (days)
3/1/2025	7/31/2025	152
Total Construction Site Area (acres)		

Construction Schedule - Detail

Construction Phase		CalEEMod Phase Type	Start Date	End Date	Total Calendar Days	Workdays (5 days/week)	Workdays (5 days/week)	Worker Trips/Max Day (In/Out)	Vendor Trips/Max Day (In/Out)	Total Haul Trips (In/Out)	Max Daily Haul Trucks/Day	Max Daily Haul Trips/Day (In/Out)
Conveyance Facilities												
Conveyance Facilities - Pipelines			3/1/2025	6/30/2025	121	86	86					
Trenching/Excavation/Shoring	Grading/Excavation		3/1/2025	4/7/2025	37	26	26	20	0	50	1	2
Building Construction - Installation of Pipelines/		Building Construction	4/8/2025	6/18/2025	71	52	52	20	2	0	0	0
Site Restoration/Paving	Paving		6/19/2025	6/23/2025	4	3	3	20	28	0	0	0
Testing	Testing/Start Up		6/24/2025	6/30/2025	6	5	5	10	0	0	0	0
						86						
						TRUE						
Conveyance Facilities - Pump Stations												
Site Preparation		Site Preparation	3/1/2025	7/31/2025	152	109	109					
Grading/Excavation	Grading/Excavation		3/1/2025	3/7/2025	6	5	5	20	0	48	5	10
Building Construction - Installation		Building Construction	3/8/2025	4/22/2025	45	32	32	20	0	372	6	12
Paving	Paving		4/23/2025	7/21/2025	89	64	64	20	2	0	0	0
Testing/Start Up	Testing/Start Up		7/22/2025	7/24/2025	2	3	3	20	8	0	0	0
						5	10	0	0	0	0	0
						109						
						TRUE						

Tehapachi GSP
Construction Equipment List
Conveyance Facilities - Pipelines

	Off-Road Equipment	Number	Hours Per Day	Notes
Trenching/Excavation/Shoring	Concrete/Industrial Saw	1	8	Dump Truck, Modeled in CalEEMod as truck trip water truck
	Excavator	1	8	
	Haul Truck	1	8	
	Off-Highway Truck	1	8	
	Plate Compactor	1	8	
	Other Construction Equipment	1	8	
	Tractor/Loader/Backhoe	2	8	
Building Construction - Installation of Pipelines/Backfill	Crane	1	8	water truck, pipe trailer shoring equipment
	Off-Highway Truck	2	8	
	Other Construction Equipment	1	8	
	Plate Compactor	1	8	
	Tractor/Loader/Backhoe	2	8	
Site Restoration/Paving	Tractor/Loader/Backhoe	2	8	
	Paver	1	8	
	Cement and Mortar Mixer	4	8	
	Roller	1	8	
Testing/Start Up				

Worker/Vendors Amounts

Phase	# of workers ¹	# of worker trips/day (In/Out)	Vendor Trips/day (In/Out)
Trenching/Excavation/Shoring	10	20	0
Building Construction - Installation of Pipelines/Backfill	10	20	2
Site Restoration/Paving	10	20	28
Testing/Start Up	5	10	0

Excavation Quantities

Parameters	Amount	
Excavation Volume (Export) (CY)	250	From project PD conservative estimate ESA
Haul Truck Capacity (CY)	10	
Total Haul Trucks Required	25	
Excavation Hauling Days	26	
Total Haul Truck Trips (In/Out)	50	
Total Haul Truck Trips (In/Out) per day	2	

Paving Concrete or Asphalt Quantities

Parameters	Amount	
Area of Paving (acres)	0.24	From construction data needs Assumption by ESA
Thickness (ft)	1.00	
Required Concrete or Asphalt Volume (CY)	392	conservative estimate ESA
Concrete or Asphalt Truck Capacity (CY)	10	
Total Concrete or Asphalt Trucks Required	40	
Total Concrete or Asphalt Truck Trips (In/Out)	80	
Paving Days	3	Included as vendor truck trips during paving phase.
Total Paving Truck Trips (In/Out) per day	28	

Notes:

- 1 Data Needs Form
- 2 [CalRecycle Weights and Volumes](#)
- 3 CalEEMod User's Guide, Appendix C
- 4 Currently assumed construction will use concrete for paving. However, modeling and calculations conservative account for asphalt paving and associated emissions if asphalt is to be used for paving.

Tehapachi GSP
Construction Equipment List
Conveyance Facilities - Pump Stations
Equipment for 1 Pump Station

	Off-Road Equipment	Number	Hours Per Day	Notes
Site Preparation	Excavator	1	8	
	Haul Truck	5	8	Dump Truck, Modeled in CalEEMod as truck trip
	Tractor/Loader/Backhoe	2	8	
	Off-Highway Truck	1	8	water truck
Grading/Excavation	Excavator	1	8	
	Tractor/Loader/Backhoe	2	8	
	Haul Truck	6	8	Dump Truck, Modeled in CalEEMod as truck trip
	Off-Highway Truck	1	8	Water Truck
	Other Construction Equipment	1	8	
Building Construction - Installation	Crane	1	8	
	Off-Highway Truck	2	8	water truck, pipe trailer
	Other Construction Equipment	1	8	shoring equipment
	Plate Compactor	1	8	
	Tractor/Loader/Backhoe	2	8	
Paving	Tractor/Loader/Backhoe	2	8	
	Paver	1	8	
	Cement and Morter Mixer	4	8	
	Roller	1	8	
Testing/Start Up				

Worker/Vendors Amounts

Phase	# of workers ¹	# of worker trips/day (In/Out)	Vendor Trips/day (In/Out)
Site Preparation	10	20	0
Grading/Excavation	10	20	0
Building Construction - Installation	10	20	2
Paving	10	20	8
Testing/Start Up	5	10	0

Assumptions for 1 Pump Station

Site Preparation		
Parameters	Amount	
Site Area (acres)	0.06	From project PD
Site Area (ft ²)	2,500	
Area of Site Prep	1,250	
Site Prep Depth (ft)	5	conservative estimate ESA
Site Prep Debris (CY)	231	
Haul Truck Capacity (CY)	10	conservative estimate ESA
Total Haul Trucks Required	24	
Site Prep Hauling Days	5	From construction data needs
Total Haul Truck Trips (In/Out)	48	
Total Haul Truck Trips (In/Out) per day	10	

Excavation Quantities

Parameters	Amount	
Site Area (ft ²)	2,500	From project PD
Grading Depth (ft)	20	From project PD
Excavation Volume (Export) (CY)	1,852	
Haul Truck Capacity (CY)	10	conservative estimate ESA
Total Haul Trucks Required	186	
Excavation Hauling Days	32	
Total Haul Truck Trips (In/Out)	372	
Total Haul Truck Trips (In/Out) per day	12	

Paving Concrete or Asphalt Quantities

Parameters	Amount	
Area of Paving (acres)	0.06	From project PD
Thickness (ft)	1.00	Assumption by ESA
Required Concrete or Asphalt Volume (CY)	93	
Concrete or Asphalt Truck Capacity (CY)	10	conservative estimate ESA
Total Concrete or Asphalt Trucks Required	10	
Total Concrete or Asphalt Truck Trips (In/Out)	20	
Paving Days	3	
Total Paving Truck Trips (In/Out) per day	8	Included as vendor truck trips during paving phase.

Notes:

- 1 Data Needs Form
- 2 [CalRecycle Weights and Volumes](#)
- 3 CalEEMod User's Guide, Appendix C

Currently assumed construction will use concrete for paving. However, modeling and calculations conservative account for asphalt paving and associated emissions if asphalt is to be used for paving.

Energy.2: Construction Energy Calculations and Modeling

Tehachapi GW Sustainability
Construction Energy Analysis

Annual Fuel Summary

Heavy-Duty Construction Equipment	
31,639	Total Project Consumption
Haul Trucks	
1,569	Total Project Consumption
Vendor Trucks	
495	Total Project Consumption
Workers	
2,416	Total Project Consumption
2,064	Project Consumption of diesel for Haul Trucks and Vendors
33,703	Total Gallons Diesel
2,416	Total Gallons Gasoline

0.4 Estimated Project Construction Duration (years)

80,931 Annual Average Gallons Diesel
5,803 Annual Average Gallons Gasoline

Kern County			Percent of Annual Project Compared to Kern County
Source	Fuel Type	Gallons	
Workers	Gasoline	395,000,000	0.001%
Off-Road/Vendor/Haul Trucks	Diesel	355,345,912	0.023%

Notes:

1 Gasoline and diesel amounts from CEC, 2019. Available: <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting>

Annual Electricity Summary

Electricity from Water for Dust Control	350 kWh/year
Total	350 kWh/year

Tehachapi GW Sustainability
Construction Energy

Construction Water Energy Estimates

Source	Acreage	Number of Days	Total Construction Water Use (Mgal)	Electricity Demand from Water Conveyance (MWh)	Annual Electricity Demand from Water Conveyance (MWh)
Conveyance Facilities					
Conveyance Facilities - Pipelines					
Trenching/Excavation/Shoring	0.24	26	0.019	0.1	0.26
Conveyance Facilities - Pump Stations					
Site Preparation	0.06	5	0.001	0.0	0.01
Grading/Excavation	0.06	32	0.006	0.0	0.08
Total			0.025	0.1	0.35

CalEEMod Water Electricity Factors	Electricity Intensity Factor To Supply (kWh/Mgal)	Electricity Intensity Factor To Treat (kWh/Mgal)	Electricity Intensity Factor To Distribute (kWh/Mgal)	Electricity Intensity Factor For Wastewater Treatment (kWh/Mgal)
	1,953	748	1,537	1,519

Construction Water GHG	Electricity Emission (MT CO2e/MWh)	Electricity Emission (lbs CO2e/MWh)
0.056	0.16	350.65

Sources and Assumptions:

CalEEMod Appendix A, Pg. 8, based on given piece of equipment can pass over in an 8-hour workday

-Electricity Intensity Factors - California Emissions Estimator Model (CalEEMod).

-Estimated construction water use assumed to be generally equivalent to landscape irrigation, based on a factor of 20.94 gallons per year per square foot of landscaped area within the Los Angeles area (Mediterranean climate), which assumes high water demand landscaping materials and an irrigation system efficiency of 85%. Factor is therefore (20.94 GAL/SF/year) x (43,560 SF/acre) / (365 days/year) / (0.85) = 2,940 gallons/acre/day, rounded up to 3,000 gallons/acre/day.

(U.S. Department of Energy, Energy Efficiency & Renewable Energy, Federal Energy Management Program. "Guidelines for Estimating Unmetered Landscaping Water Use." July 2010. Page 12, Table 4 - Annual Irrigation Factor – Landscaped Areas with High Water Requirements).

Energy.3: Operational Energy Calculations and Modeling

Tehapachi GSP
Energy Consumption - GHG Emissions
Wells and Pump Stations

Estimated GHG Emissiosn from Electricity demand from Wells and Pump Stations

Land Use Type	Electricity Demand (kWh/yr)
Pump Stations	530,000 530,000

Notes:
a. Electricity consumption kwh based on values from PD

Year	Source	GHG Emissions (lbs/yr)					MTCO2e (MT/yr)
		Electricity Demand (million kWh)	CO2e	CH4	N2O	CO2e	
2026	Total Energy Consumption	0.5300	183,483.91	17.49	2.12	183,484	83.2

Year 2026	
GHG	Intensity factor (lbs/MWh)
CO2	346.20
CH4	0.033
N2O	0.004

Tehachapi GW Sustainability
Operational Energy Demand

Electricity	kWh/yr	MWh/yr
Pump Station	530,000	530.000
Total Building Energy	530,000	530.0
Total	530,000	530
Total (including water, see below)	530,000	530

Source: California Air Resources Board, CalEEMod, Version 2016.3.2.

Water	Mgal/yr	MWh/yr
Pump Station	0.00	-
Total	-	-

Electricity Intensity Factors	kWh/Mgal
Electricity Factor - Supply	1,953
Electricity Factor - Treat	748
Electricity Factor - Distribute	1,537
Electricity Factor - Wastewater Treatment	1,519

Electricity from Water Demand	kWh/yr	MWh/yr
Total	-	-

Source: California Air Resources Board, CalEEMod, Version 2016.3.2.

Water Demand based on Project Water supply Assessment

Sewage Facilities Charge, Sewage Generation Factor for Residential and Commercial Categories, 2012.

Natural Gas	kBtu/yr	cubic foot (cf)
Pump Station	0	-
Total	-	-

Source: California Air Resources Board, CalEEMod, Version 2016.3.2.

Conversion factor of 1,035 Btu per cubic foot based on United States Energy Information Administration data

(see: USEIA, Natural Gas, Heat Content of Natural Gas Consumed, February 28, 2018,

https://www.eia.gov/dnav/ng/ng_cons_heat_a_EPG0_VGTH_btucf_a.htm. Accessed March 2020.)

Electricity	MWh/yr
Total SCE, 2023	79,256,000
Project Annual	530.0
Net Project Annual	530.0
Percent Net Project of SCE	0.00067%

Source: Southern California Edison 2023 Annual Report. <https://docs.cpuc.ca.gov/>

Natural Gas	million cubic foot (cf)
SoCalGas 2022	896,805
Project Annual	-
Existing Annual	-
Net Project Annual	-
Percent Net Project of SoCalGas	0.0000%

Source: California Gas and Electric Utilities, 2020 California Gas

Report, p. 144,2020.

Appendix GHG

Greenhouse Gas Calculations

GHG.1: Assumptions

Project Land Uses						
Land Use Type	CalEEMod LandUse Type	CalEEMod LandUse Subtype	Amount	Unit	Building sq.ft.	Acreage
Conveyance Facilities	Parking	Other Non-Asphalt Surface	13.06	1000sqft	13,060	0.30
Pump station (borrow pit)	Parking	Other Non-Asphalt Surface	2.5	1000sqft	2,500	0.06
Pipeline	Parking	Other Non-Asphalt Surface	10.56	1000sqft	10,560	0.24
Total					13,060	

PD

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pg 1-1

Construction Schedule - Overview		
Start	End	Total Duration (days)
3/1/2025	7/31/2025	152
Total Construction Site Area (acres)		

Construction Phase	CalEEMod Phase Type	Start Date	End Date	Total Calendar Days	Workdays (5 days/week)	Workdays (5 days/week)	Worker Trips/Max Day (In/Out)	Vendor Trips/Max Day (In/Out)	Total Haul Trips (In/Out)	Max Daily Haul Trucks/Day	Max Daily Haul Trips/Day (In/Out)
Conveyance Facilities											
Conveyance Facilities - Pipelines				121	86	86					
Trenching/Excavation/Shoring	Grading/Excavation	3/1/2025	4/7/2025	37	26	26	20	0	50	1	2
Building Construction - Installation of Pipelines/	Building Construction	4/8/2025	6/18/2025	71	52	52	20	2	0	0	0
Site Restoration/Paving	Paving	6/19/2025	6/23/2025	4	3	3	20	28	0	0	0
Testing	Testing/Start Up	6/24/2025	6/30/2025	6	5	5	10	0	0	0	0
						86 TRUE					
Conveyance Facilities - Pump Stations				152	109	109					
Site Preparation	Site Preparation	3/1/2025	3/7/2025	6	5	5	20	0	48	5	10
Grading/Excavation	Grading/Excavation	3/8/2025	4/22/2025	45	32	32	20	0	372	6	12
Building Construction - Installation	Building Construction	4/23/2025	7/21/2025	89	64	64	20	2	0	0	0
Paving	Paving	7/22/2025	7/24/2025	2	3	3	20	8	0	0	0
Testing/Start Up	Testing/Start Up	7/25/2025	7/31/2025	6	5	5	10	0	0	0	0
						109 TRUE					

Tehapachi GSP
Construction Equipment List
Conveyance Facilities - Pipelines

	Off-Road Equipment	Number	Hours Per Day	Notes
Trenching/Excavation/Shoring	Concrete/Industrial Saw	1	8	Dump Truck, Modeled in CalEEMod as truck trip water truck
	Excavator	1	8	
	Haul Truck	1	8	
	Off-Highway Truck	1	8	
	Plate Compactor	1	8	
	Other Construction Equipment	1	8	
	Tractor/Loader/Backhoe	2	8	
Building Construction - Installation of Pipelines/Backfill	Crane	1	8	water truck, pipe trailer shoring equipment
	Off-Highway Truck	2	8	
	Other Construction Equipment	1	8	
	Plate Compactor	1	8	
	Tractor/Loader/Backhoe	2	8	
Site Restoration/Paving	Tractor/Loader/Backhoe	2	8	
	Paver	1	8	
	Cement and Mortar Mixer	4	8	
	Roller	1	8	
Testing/Start Up				

Worker/Vendors Amounts

Phase	# of workers ¹	# of worker trips/day (In/Out)	Vendor Trips/day (In/Out)
Trenching/Excavation/Shoring	10	20	0
Building Construction - Installation of Pipelines/Backfill	10	20	2
Site Restoration/Paving	10	20	28
Testing/Start Up	5	10	0

Excavation Quantities

Parameters	Amount	
Excavation Volume (Export) (CY)	250	From project PD conservative estimate ESA
Haul Truck Capacity (CY)	10	
Total Haul Trucks Required	25	
Excavation Hauling Days	26	
Total Haul Truck Trips (In/Out)	50	
Total Haul Truck Trips (In/Out) per day	2	

Paving Concrete or Asphalt Quantities

Parameters	Amount	
Area of Paving (acres)	0.24	From construction data needs Assumption by ESA
Thickness (ft)	1.00	
Required Concrete or Asphalt Volume (CY)	392	conservative estimate ESA
Concrete or Asphalt Truck Capacity (CY)	10	
Total Concrete or Asphalt Trucks Required	40	
Total Concrete or Asphalt Truck Trips (In/Out)	80	
Paving Days	3	Included as vendor truck trips during paving phase.
Total Paving Truck Trips (In/Out) per day	28	

Notes:

- 1 Data Needs Form
- 2 [CalRecycle Weights and Volumes](#)
- 3 CalEEMod User's Guide, Appendix C
- 4 Currently assumed construction will use concrete for paving. However, modeling and calculations conservative account for asphalt paving and associated emissions if asphalt is to be used for paving.

Tehapachi GSP
Construction Equipment List
Conveyance Facilities - Pump Stations
Equipment for 1 Pump Station

	Off-Road Equipment	Number	Hours Per Day	Notes
Site Preparation	Excavator	1	8	
	Haul Truck	5	8	Dump Truck, Modeled in CalEEMod as truck trip
	Tractor/Loader/Backhoe	2	8	
	Off-Highway Truck	1	8	water truck
Grading/Excavation	Excavator	1	8	
	Tractor/Loader/Backhoe	2	8	
	Haul Truck	6	8	Dump Truck, Modeled in CalEEMod as truck trip
	Off-Highway Truck	1	8	Water Truck
	Other Construction Equipment	1	8	
Building Construction - Installation	Crane	1	8	
	Off-Highway Truck	2	8	water truck, pipe trailer
	Other Construction Equipment	1	8	shoring equipment
	Plate Compactor	1	8	
	Tractor/Loader/Backhoe	2	8	
Paving	Tractor/Loader/Backhoe	2	8	
	Paver	1	8	
	Cement and Morter Mixer	4	8	
	Roller	1	8	
Testing/Start Up				

Worker/Vendors Amounts

Phase	# of workers ¹	# of worker trips/day (In/Out)	Vendor Trips/day (In/Out)
Site Preparation	10	20	0
Grading/Excavation	10	20	0
Building Construction - Installation	10	20	2
Paving	10	20	8
Testing/Start Up	5	10	0

Assumptions for 1 Pump Station

Site Preparation		
Parameters	Amount	
Site Area (acres)	0.06	From project PD
Site Area (ft ²)	2,500	
Area of Site Prep	1,250	
Site Prep Depth (ft)	5	conservative estimate ESA
Site Prep Debris (CY)	231	
Haul Truck Capacity (CY)	10	conservative estimate ESA
Total Haul Trucks Required	24	
Site Prep Hauling Days	5	From construction data needs
Total Haul Truck Trips (In/Out)	48	
Total Haul Truck Trips (In/Out) per day	10	

Excavation Quantities

Parameters	Amount	
Site Area (ft ²)	2,500	From project PD
Grading Depth (ft)	20	From project PD
Excavation Volume (Export) (CY)	1,852	
Haul Truck Capacity (CY)	10	conservative estimate ESA
Total Haul Trucks Required	186	
Excavation Hauling Days	32	
Total Haul Truck Trips (In/Out)	372	
Total Haul Truck Trips (In/Out) per day	12	

Paving Concrete or Asphalt Quantities

Parameters	Amount	
Area of Paving (acres)	0.06	From project PD
Thickness (ft)	1.00	Assumption by ESA
Required Concrete or Asphalt Volume (CY)	93	
Concrete or Asphalt Truck Capacity (CY)	10	conservative estimate ESA
Total Concrete or Asphalt Trucks Required	10	
Total Concrete or Asphalt Truck Trips (In/Out)	20	
Paving Days	3	
Total Paving Truck Trips (In/Out) per day	8	Included as vendor truck trips during paving phase.

Notes:

- 1 Data Needs Form
- 2 [CalRecycle Weights and Volumes](#)
- 3 CalEEMod User's Guide, Appendix C

Currently assumed construction will use concrete for paving. However, modeling and calculations conservative account for asphalt paving and associated emissions if asphalt is to be used for paving.

GHG.2: Construction GHG Calculations and Modeling

Tehachapi GSP

Construction Annual GHG

	Metric Tons/Year		
	CalEEMod	Water Conveyance for Dust Control	Total
Year			
2025	359.00	0.06	359.05
Total	359.00	0.06	359.05
Amortized - 30 years	11.97	0.00	11.97

Tehachapi GW Sustainability
Construction Energy

Construction Water Energy Estimates

Source	Acreage	Number of Days	Total Construction Water Use (Mgal)	Electricity Demand from Water Conveyance (MWh)	Annual Electricity Demand from Water Conveyance (MWh)
Conveyance Facilities					
Conveyance Facilities - Pipelines					
Trenching/Excavation/Shoring	0.24	26	0.019	0.1	0.26
Conveyance Facilities - Pump Stations					
Site Preparation	0.06	5	0.001	0.0	0.01
Grading/Excavation	0.06	32	0.006	0.0	0.08
Total			0.025	0.1	0.35

CalEEMod Water Electricity Factors	Electricity Intensity Factor To Supply (kWh/Mgal)	Electricity Intensity Factor To Treat (kWh/Mgal)	Electricity Intensity Factor To Distribute (kWh/Mgal)	Electricity Intensity Factor For Wastewater Treatment (kWh/Mgal)
	1,953	748	1,537	1,519

Construction Water GHG	Electricity Emission (MT CO2e/MWh)	Electricity Emission (lbs CO2e/MWh)
0.056	0.16	350.65

Sources and Assumptions:

CalEEMod Appendix A, Pg. 8, based on given piece of equipment can pass over in an 8-hour workday

-Electricity Intensity Factors - California Emissions Estimator Model (CalEEMod).

-Estimated construction water use assumed to be generally equivalent to landscape irrigation, based on a factor of 20.94 gallons per year per square foot of landscaped area within the Los Angeles area (Mediterranean climate), which assumes high water demand landscaping materials and an irrigation system efficiency of 85%. Factor is therefore (20.94 GAL/SF/year) x (43,560 SF/acre) / (365 days/year) / (0.85) = 2,940 gallons/acre/day, rounded up to 3,000 gallons/acre/day.

(U.S. Department of Energy, Energy Efficiency & Renewable Energy, Federal Energy Management Program. "Guidelines for Estimating Unmetered Landscaping Water Use." July 2010. Page 12, Table 4 - Annual Irrigation Factor – Landscaped Areas with High Water Requirements).

GHG.3: Operational GHG Calculations and Modeling

Tehapachi GSP
Energy Consumption - GHG Emissions
Wells and Pump Stations

Estimated GHG Emissiosn from Electricity demand from Wells and Pump Stations

Land Use Type		Electricity Demand (kWh/yr)
Pump Stations	530,000	530,000

Notes:
a. Electricity consumption kwh based on values from PD

Year	Source	GHG Emissions (lbs/yr)					MTCO2e (MT/yr)
		Electricity Demand (million kWh)	CO2e	CH4	N2O	CO2e	
2026	Total Energy Consumption	0.5300	183,483.91	17.49	2.12	183,484	83.2

Year 2026	
GHG	Intensity factor (lbs/MWh)
CO2	346.20
CH4	0.033
N2O	0.004

Appendix NOI

Noise Calculations

Project: Tehachapi Construction
Construction Noise Impact on Sensitive Receptors



Parameters

Construction Hours:	8 Daytime hours (7 am to 7 pm) 0 Evening hours (7 pm to 10 pm) 0 Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3

				R1 - Residences					R2 - Hotel				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA	Distance (ft)	Lmax	Leq	L11	Estimated Noise Shielding, dBA
Conveyance Facilities - Pipelines													
Trenching/Excavation/Shoring					92.9	87.1				71.9	66.1		
Concrete Saw	1	90	20%	50	90	83	86	0	560	69	62	65	0
Excavator	1	81	40%	50	81	77	80	0	560	60	56	59	0
Water Trucks	1	80	10%	50	80	70	73	0	560	59	49	52	0
Compactor (ground)	1	83	20%	50	83	76	79	0	560	62	55	58	0
Other Equipment	1	85	50%	50	85	82	85	0	560	64	61	64	0
Tractor/Loader/Backhoe	2	80	25%	50	83	77	80	0	560	62	56	59	0
Building Construction - Pipelines/Backfill					90.2	84.6				69.2	63.6		
Cranes	1	81	16%	50	81	73	76	0	560	60	52	55	0
Water Trucks	2	80	10%	50	83	73	76	0	560	62	52	55	0
Other Equipment	1	85	50%	50	85	82	85	0	560	64	61	64	0
Compactor (ground)	1	83	20%	50	83	76	79	0	560	62	55	58	0
Tractor/Loader/Backhoe	2	80	25%	50	83	77	80	0	560	62	56	59	0
Site Restoration/Paving					88.2	83.5				67.3	62.5		
Tractor/Loader/Backhoe	2	80	25%	50	83	77	80	0	560	62	56	59	0
Paver	1	77	50%	50	77	74	77	0	560	56	53	56	0
Cement and Mortar Mixers	4	79	40%	50	85	81	84	0	560	64	60	63	0
Roller	1	80	20%	50	80	73	76	0	560	59	52	55	0
Conveyance Facilities - Pump Stations													
Site Preparation					64.4	58.5				68.9	63.0		
Excavator	1	81	40%	625	59	55	58	0	370	64	60	63	0
Tractor/Loader/Backhoe	2	80	25%	625	61	55	58	0	370	66	60	63	0
Water Trucks	1	80	10%	625	58	48	51	0	370	63	53	56	0
Grading/Excavation					66.8	62.4				71.3	66.9		
Excavator	1	81	40%	625	59	55	58	0	370	64	60	63	0
Tractor/Loader/Backhoe	2	80	25%	625	61	55	58	0	370	66	60	63	0
Water Trucks	1	80	10%	625	58	48	51	0	370	63	53	56	0
Other Equipment	1	85	50%	625	63	60	63	0	370	68	65	68	0
Building Construction					68.2	62.7				72.8	67.2		
Cranes	1	81	16%	625	59	51	54	0	370	64	56	59	0
Water Trucks	2	80	10%	625	61	51	54	0	370	66	56	59	0
Other Equipment	1	85	50%	625	63	60	63	0	370	68	65	68	0
Compactor (ground)	1	83	20%	625	61	54	57	0	370	66	59	62	0
Tractor/Loader/Backhoe	2	80	25%	625	61	55	58	0	370	66	60	63	0
Paving					66.3	61.5				70.9	66.1		
Tractor/Loader/Backhoe	2	80	25%	625	61	55	58	0	370	66	60	63	0
Paver	1	77	50%	625	55	52	55	0	370	60	57	60	0
Cement and Mortar Mixers	4	79	40%	625	63	59	62	0	370	68	64	67	0
Roller	1	80	20%	625	58	51	54	0	370	63	56	59	0

Overlapping Phase Noise Levels

Trenching/Excavation/Shoring + Site Preparation	92.9	87.1	73.7	67.8
Trenching/Excavation/Shoring + Grading/Excavation	92.9	87.1	74.6	69.5
Pipeline Construction + Grading	90.2	84.6	73.4	68.6
Pipeline Construction + Pump Station Construction	90.2	84.6	74.4	68.8
Pump Station Construction + Site Restoration/Paving	88.3	83.5	73.9	68.5
Maximum Pipeline Noise Levels	92.9	87.1	71.9	66.1
Maximum Pump Station Noise Levels	68.2	62.7	72.8	67.2

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

TRAFFIC NOISE ANALYSIS TOOL



Project: Tehachapi GW Sustainability
Traffic Scenario: Construction
Source: Client

Roadway Segment	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Noise Level dBA CNEL
			Auto	MT	HT	Auto	MT	HT		
Construction Vehicles	Hard	30	35	35	30	40	0	4	55.8	56.1

Model Notes:

The calculation is based on the methodology described in FHWA Traffic Noise Model Technical Manual (1998).

The peak hour noise level at 50 feet was validated with the results from FHWA Traffic Noise Model Version 2.5.

Accuracy of the calculation is within ± 0.1 dB when comparing to TNM results.

Noise propagation greater than 50 feet is based on the following assumptions:

Vehicles are assumed to be on a long straight roadway with cruise speed.

Roadway grade is less than 1.5%.

CNEL levels were obtained based on Figure 2-19, on page 2-58 Caltran's TeNS 2013.

Appendix TRIBAL

Native American Outreach



115 South Robinson Street
Tehachapi, California 93561-1722
(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

Chumash Council of Bakersfield
Julio Quair, Chairperson
729 Texas Street
Bakersfield, CA, 93307

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

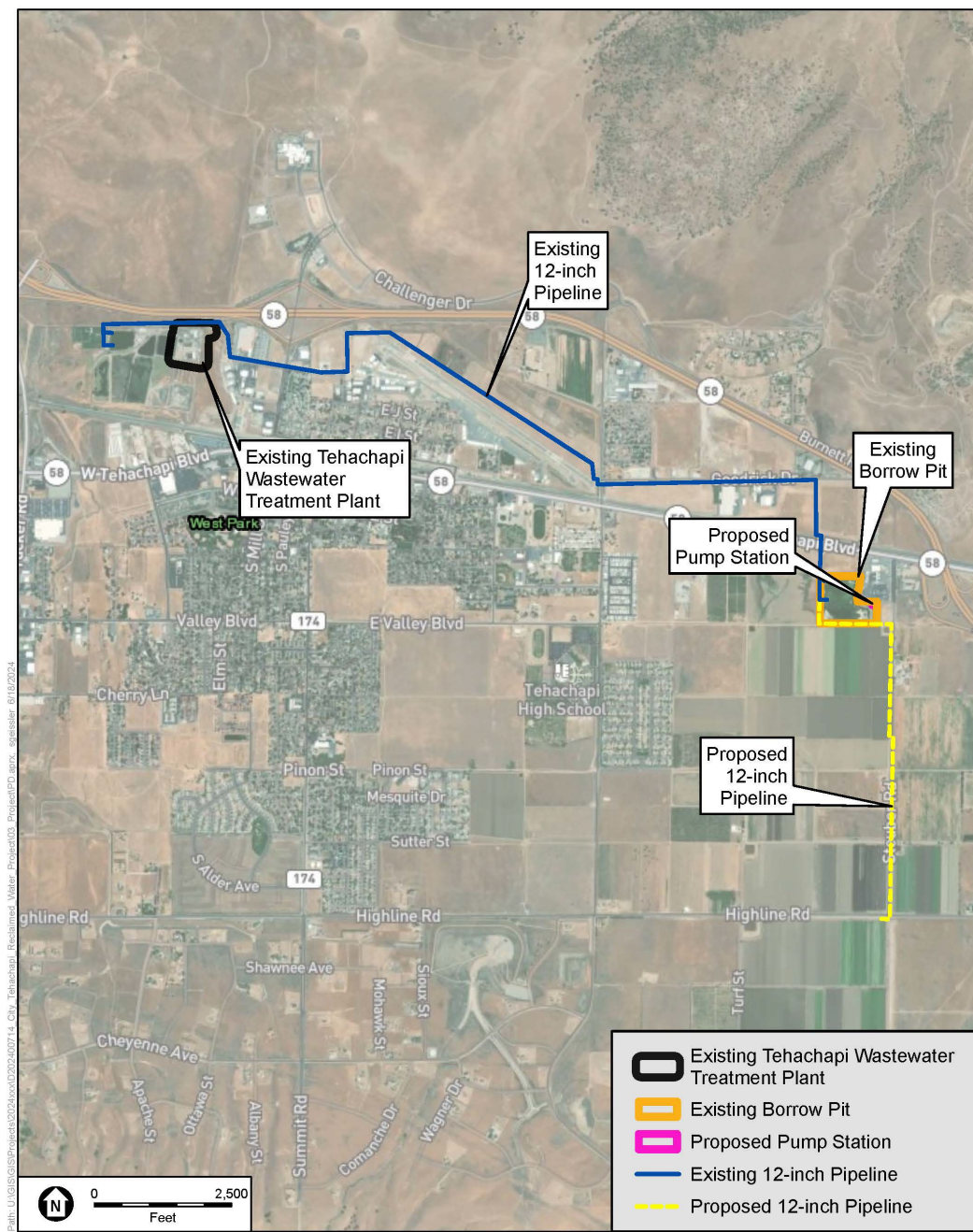
Dear Mr. Quair:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

The City is preparing an Initial Study/Mitigated Negative Declaration for the Project in accordance with the requirements of CEQA. Based on recent consultation for another project in the general vicinity, the City is providing you with notification of the Project pursuant with the requirements of Assembly Bill 52 and Public Resources Code 21080.3.1. Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the City of Tehachapi. Should you be interested in an opportunity to consult with the City on the Project's potential to impact Tribal Cultural Resources, please send your request for consultation, in writing, to the contact person noted below at

Sincerely,

Attachment: Existing Site Vicinity Map



SOURCE: Mapbox, 2024; ESA, 2024

Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





115 South Robinson Street
Tehachapi, California 93561-1722
(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

Coastal Band of the Chumash Nation
Gabe Frausto, Chairman
P.O. Box 40653
Santa Barbara, CA, 93140

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

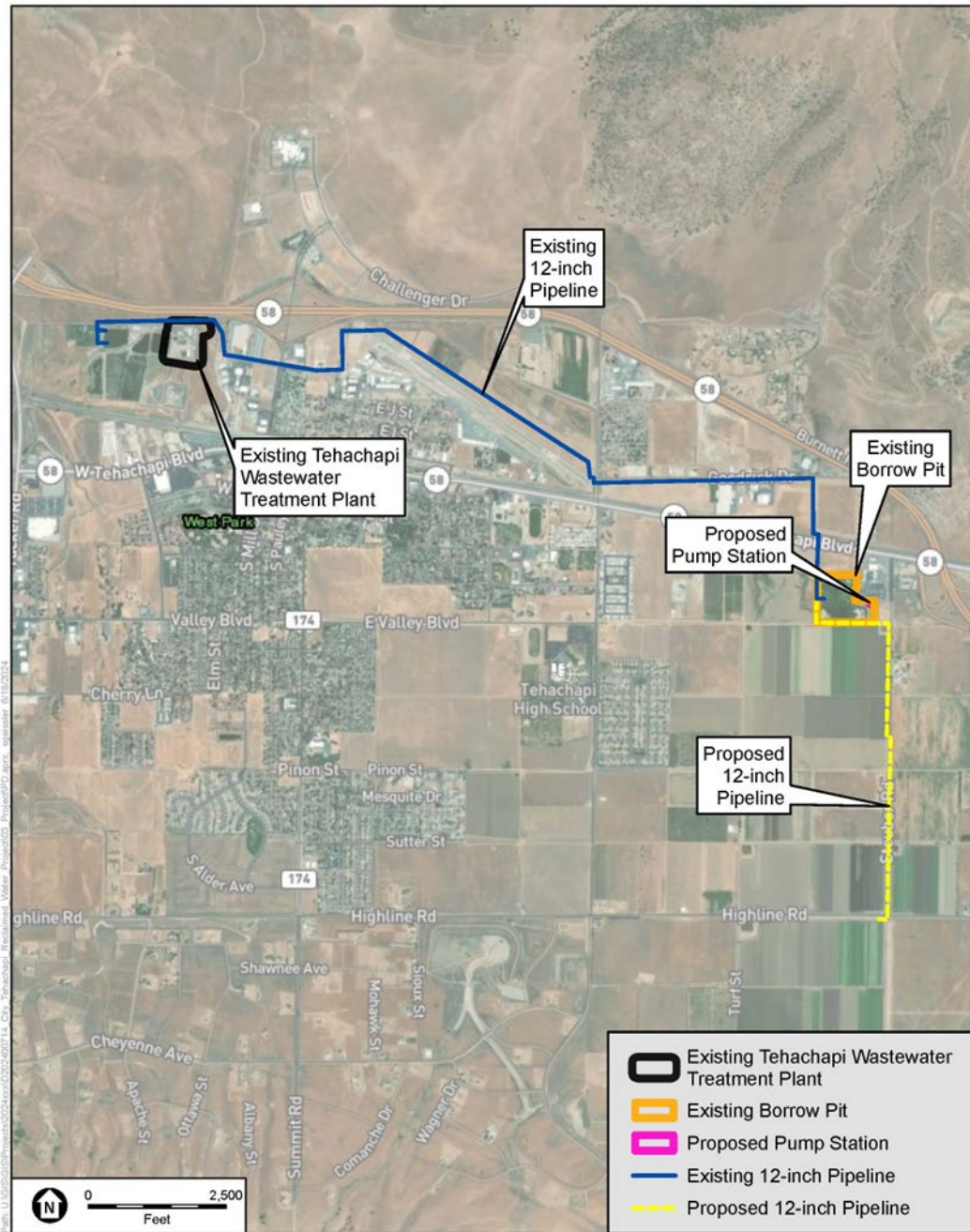
Dear Mr. Frausto:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

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SOURCE: Mapbox, 2024; ESA, 2024

Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





115 South Robinson Street
Tehachapi, California 93561-1722
(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

Kern Valley Indian Community
Brandy Kendricks, Tribal Member Monitor
30741 Foxridge Court
Tehachapi, CA, 93561

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

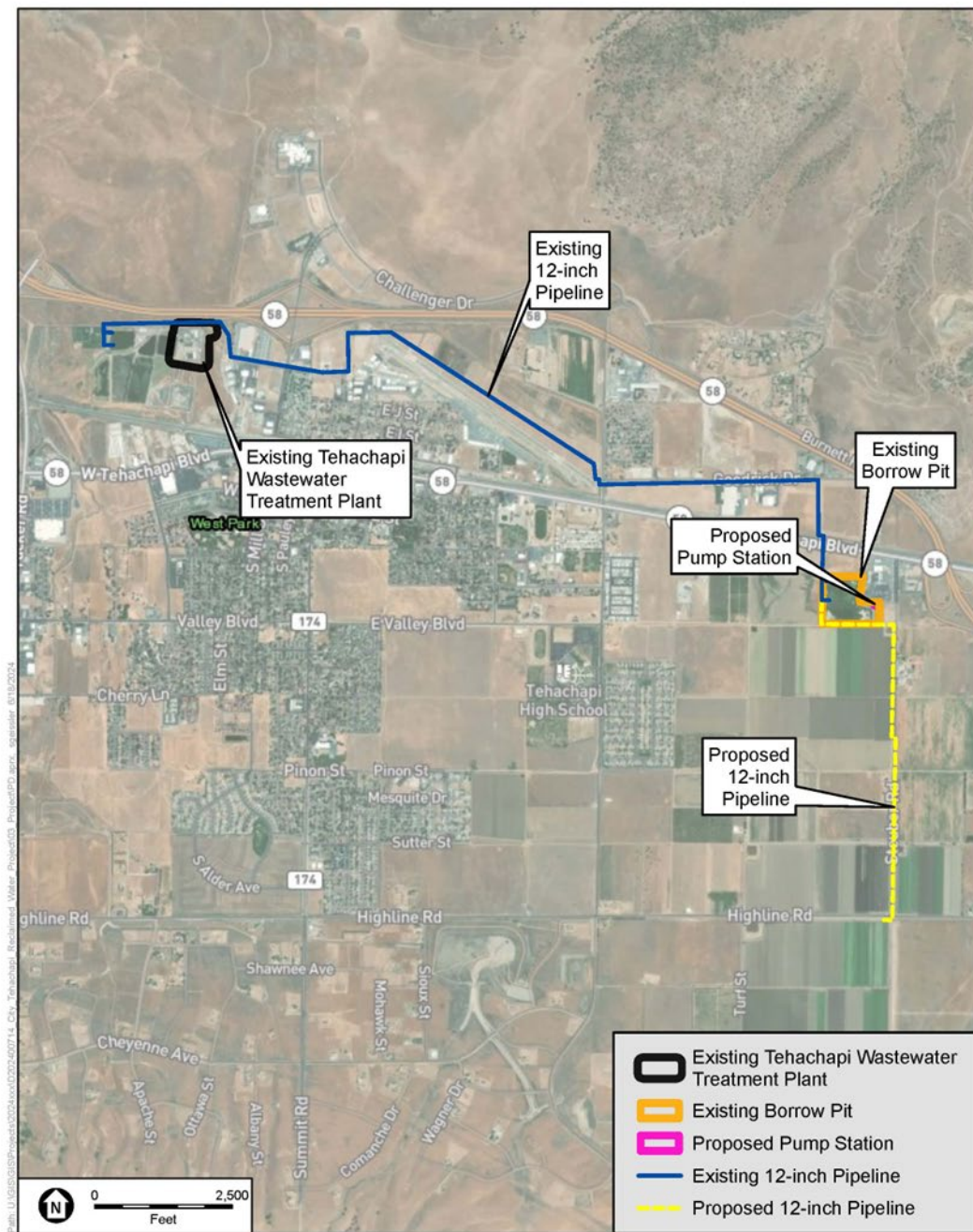
Dear Mr. Kendricks:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

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Sincerely,

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SOURCE: Mapbox, 2024; ESA, 2024

Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





115 South Robinson Street
Tehachapi, California 93561-1722
(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

Kern Valley Indian Community
Robert Robinson, Chairperson
P.O. Box 1010
Lake Isabella, CA, 93240

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

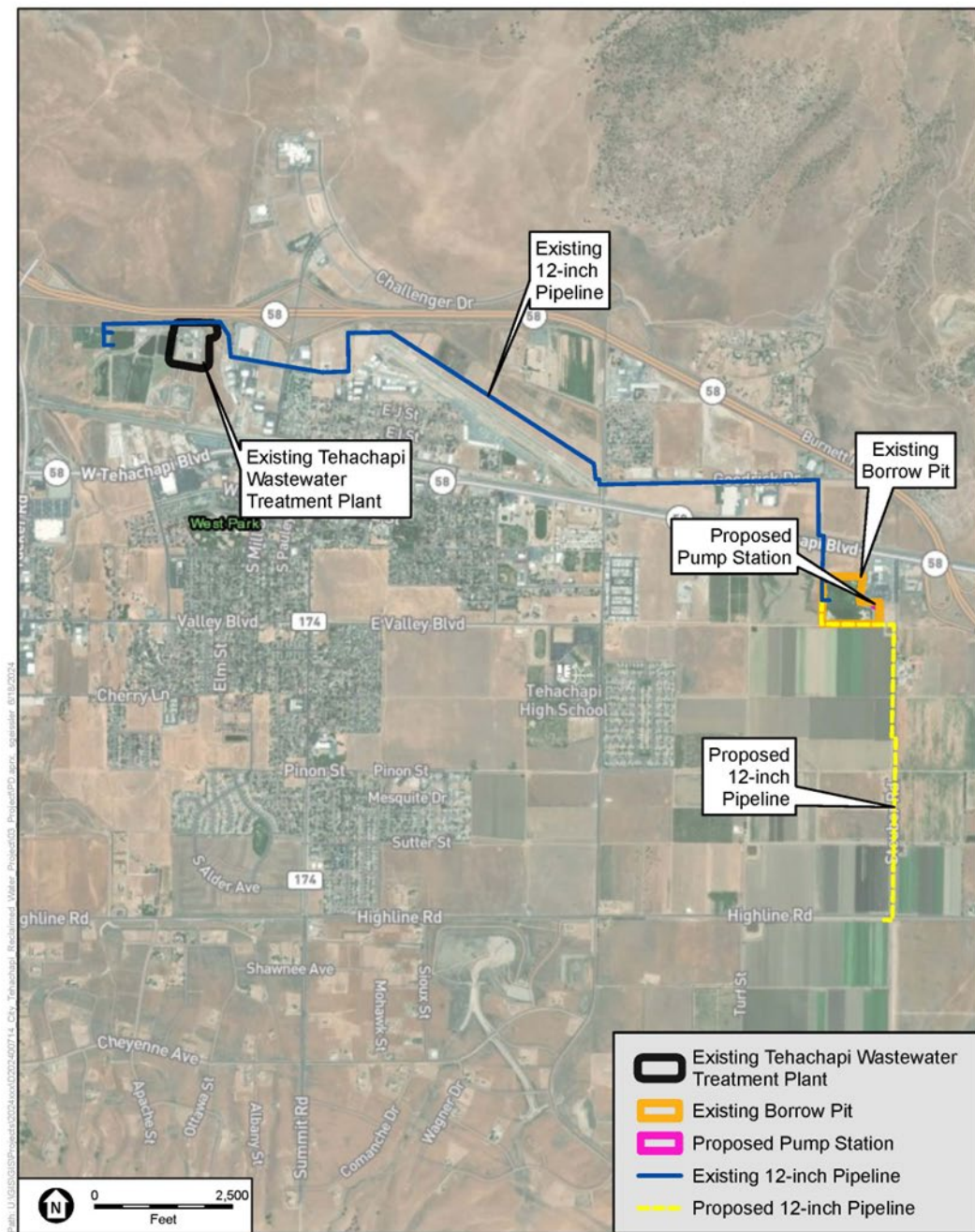
Dear Mr. Robinson:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

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Sincerely,

Attachment: Existing Site Vicinity Map



SOURCE: Mapbox, 2024; ESA, 2024

Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





115 South Robinson Street
Tehachapi, California 93561-1722
(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez, Chairperson
115 Radio Street
Bakersfield, CA, 93305

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

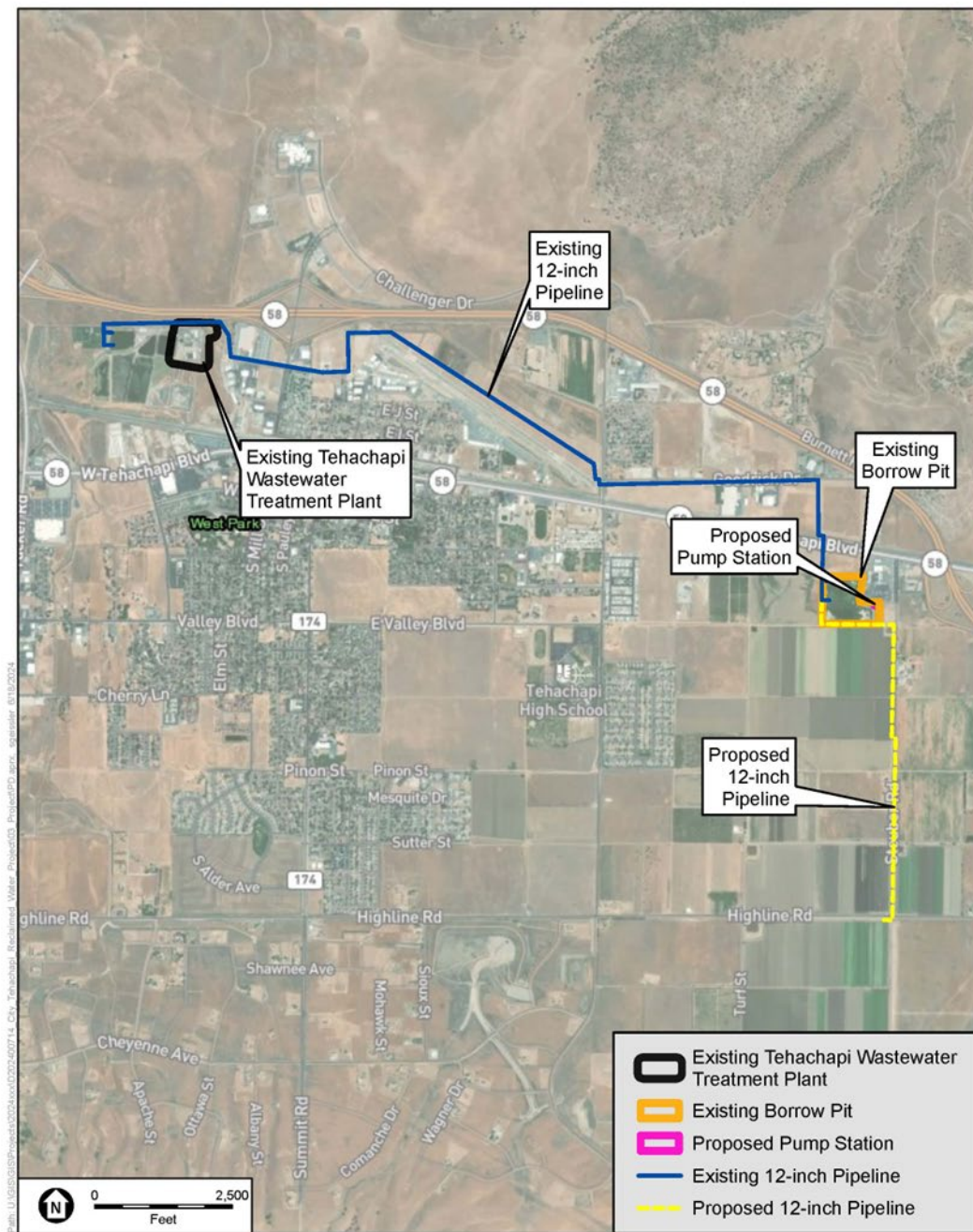
Dear Mrs. Dominguez:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

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Sincerely,

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SOURCE: Mapbox, 2024; ESA, 2024

Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





115 South Robinson Street
Tehachapi, California 93561-1722
(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

Northern Chumash Tribal Council
Violet Walker, Chairperson
P.O. Box 6533
Los Osos, CA, 93412

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

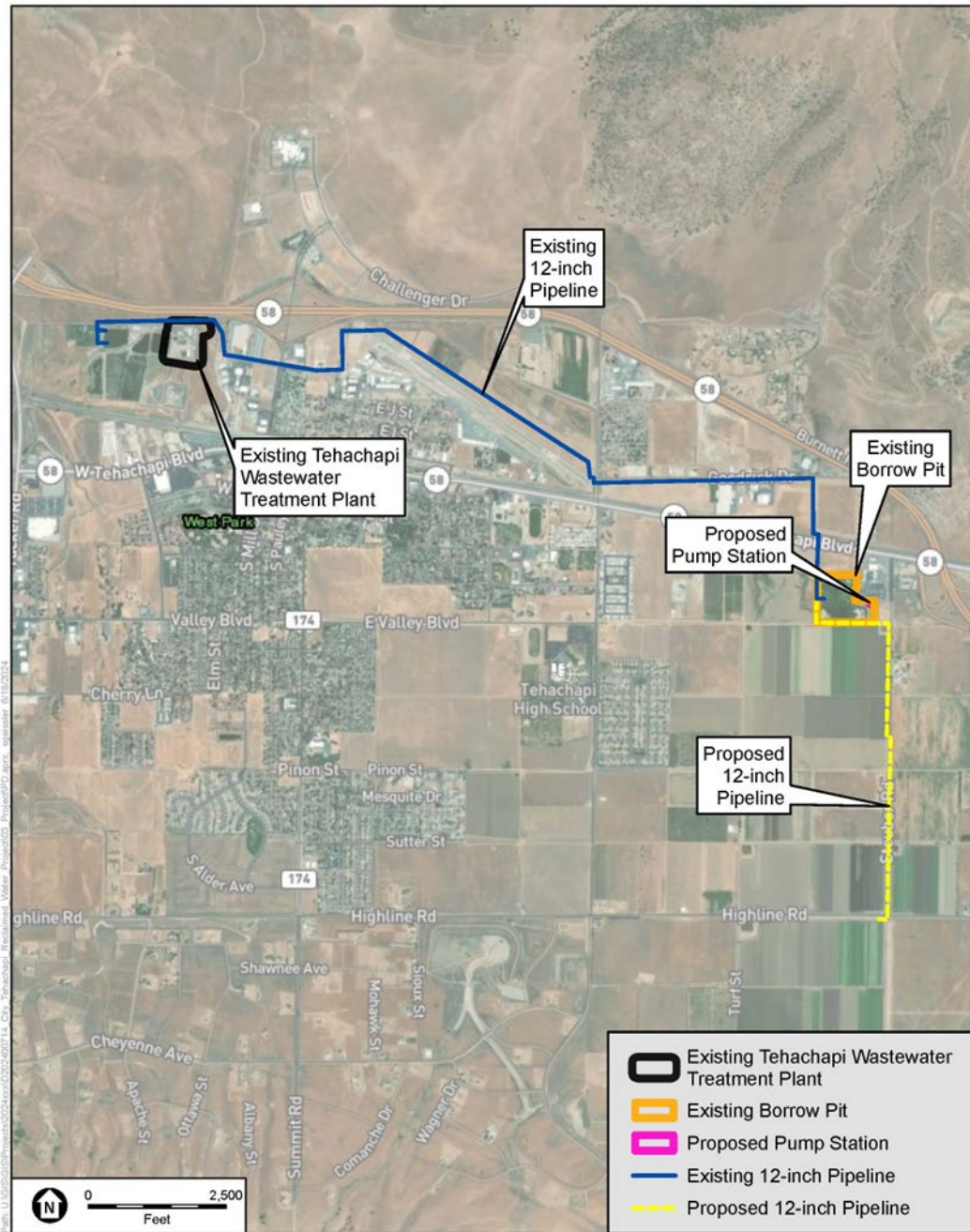
Dear Mrs. Walker:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

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Sincerely,

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SOURCE: Mapbox, 2024; ESA, 2024

Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





115 South Robinson Street
Tehachapi, California 93561-1722
(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899
Yuma, AZ, 85366

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

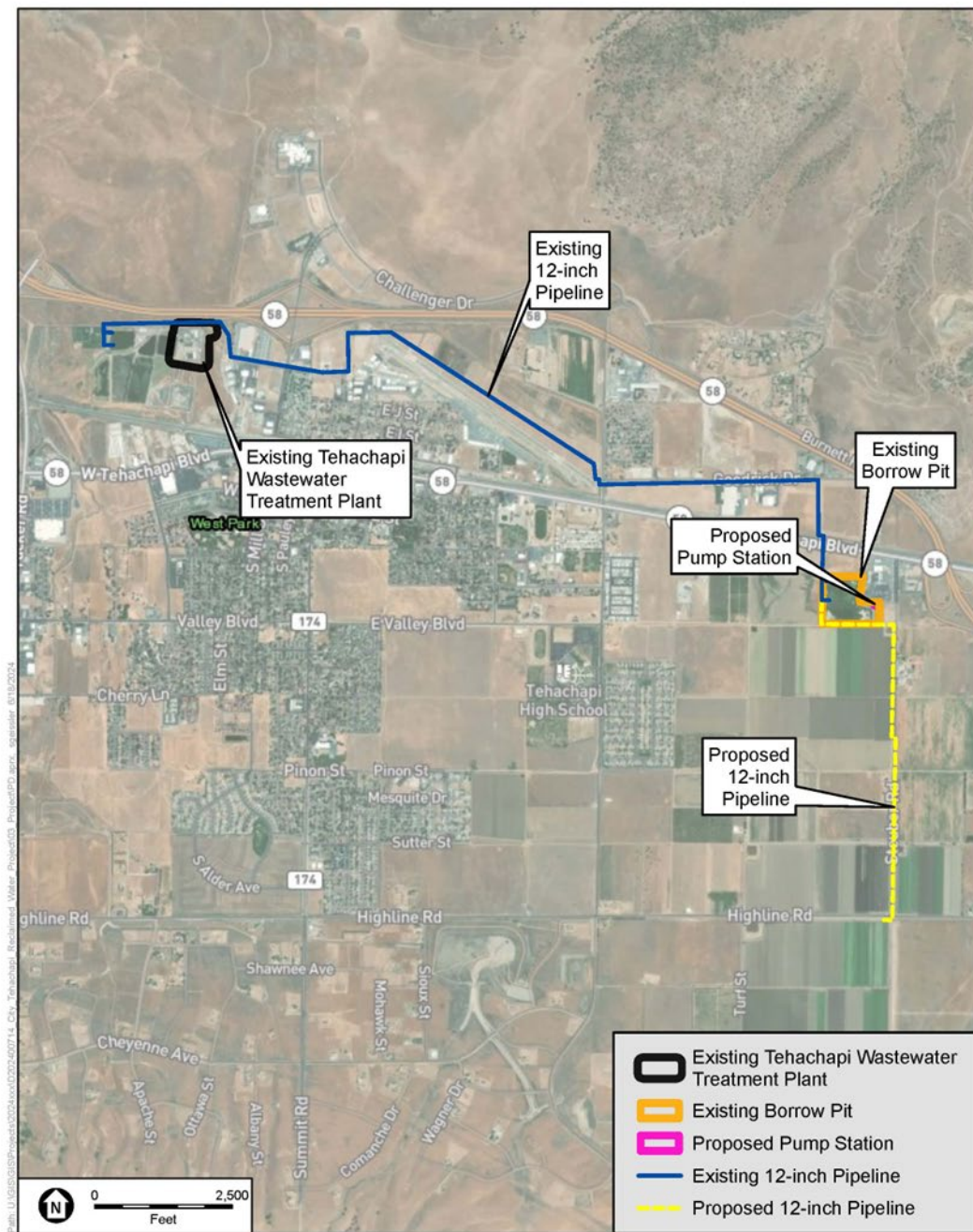
Dear Mr. McCormick:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

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Sincerely,

Attachment: Existing Site Vicinity Map



SOURCE: Mapbox, 2024; ESA, 2024

Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





115 South Robinson Street
Tehachapi, California 93561-1722
(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

Quechan Tribe of the Fort Yuma Reservation
Jordan Joaquin, President, Quechan Tribal Council
P.O. Box 1899
Yuma, AZ, 85366

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

Dear Mr. Joaquin:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

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Sincerely,

Attachment: Existing Site Vicinity Map



115 South Robinson Street
Tehachapi, California 93561-1722
(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman - Kw'ts'an Cultural Committee
P.O. Box 1899
Yuma, AZ, 85366

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

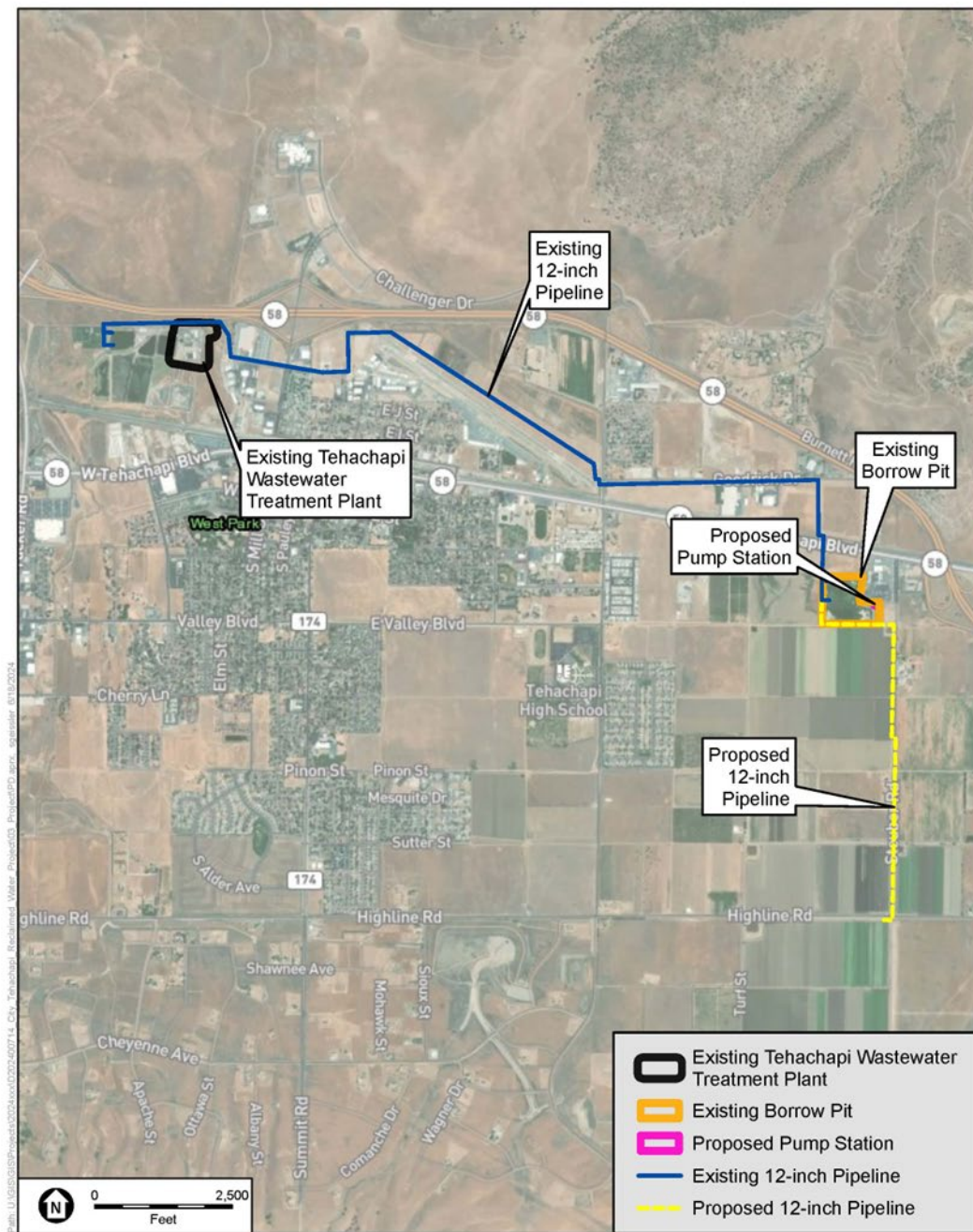
Dear Mr. Scott:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

The City is preparing an Initial Study/Mitigated Negative Declaration for the Project in accordance with the requirements of CEQA. Based on recent consultation for another project in the general vicinity, the City is providing you with notification of the Project pursuant with the requirements of Assembly Bill 52 and Public Resources Code 21080.3.1. Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the City of Tehachapi. Should you be interested in an opportunity to consult with the City on the Project's potential to impact Tribal Cultural Resources, please send your request for consultation, in writing, to the contact person noted below at

Sincerely,

Attachment: Existing Site Vicinity Map



SOURCE: Mapbox, 2024; ESA, 2024

Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





115 South Robinson Street
Tehachapi, California 93561-1722
(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838
Newhall, CA, 91322

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

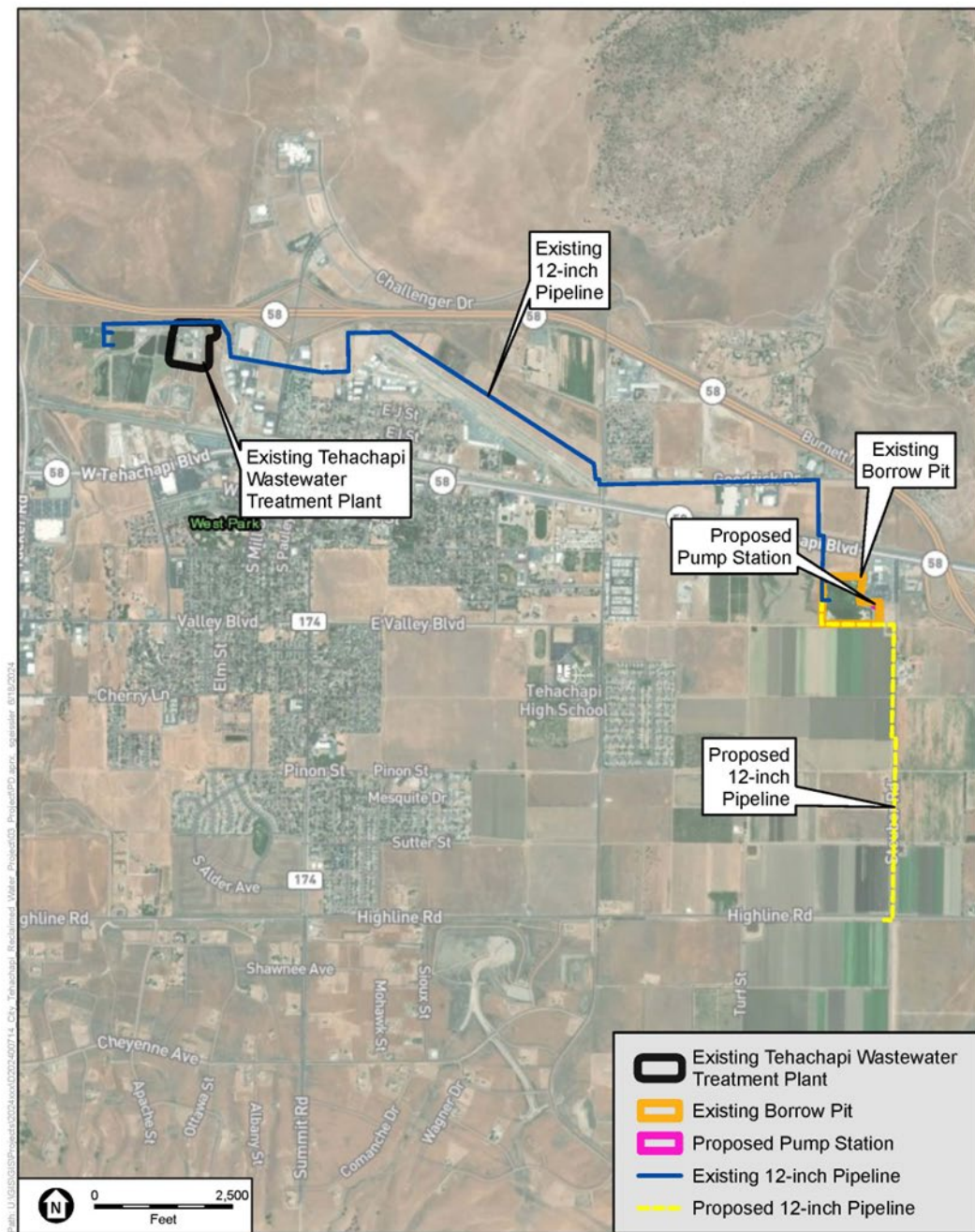
Dear Mrs. Yocum:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

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Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





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June 25, 2024

San Manuel Band of Mission Indians
Alexandra McCleary, Senior Manager of Cultural Resources Management
26569 Community Center Drive
Highland, CA, 92346

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

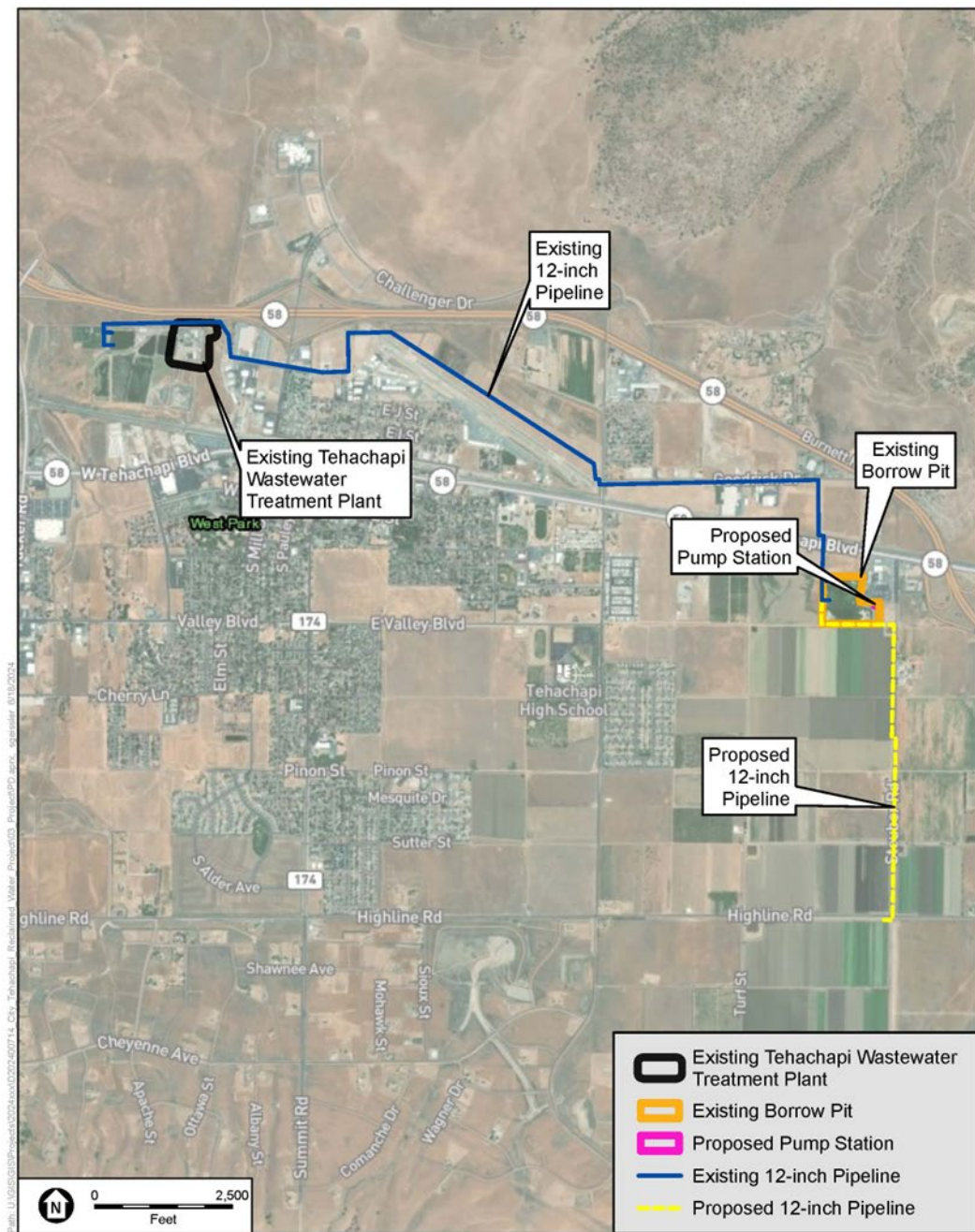
Dear Mrs. McCleary:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

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Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





115 South Robinson Street
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(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

Tejon Indian Tribe
Candice Garza, CRM Scheduler
4941 David Road
Bakersfield, CA, 93307

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

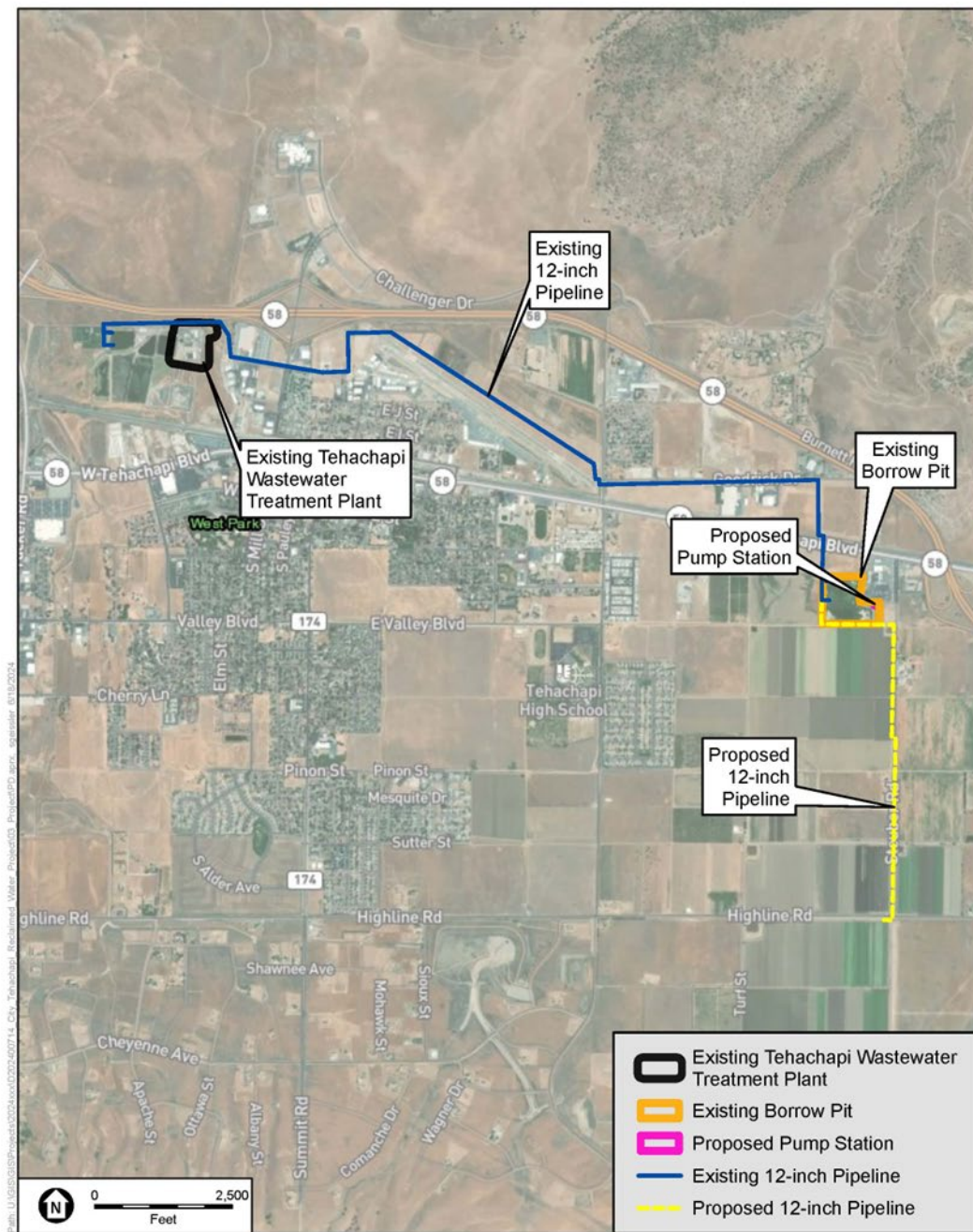
Dear Mrs. Garza:

The City of Tehachapi (City) as lead agency under the California Environmental Quality Act (CEQA) is proposing to implement the Reclaimed Water Project (proposed project), a project that would allow the City to change the place of use of reclaimed water for agricultural purposes within the City. To do this, the proposed project would construct a new pump station at the Borrow Pit and construct a new approximately 1-mile pipeline to convey water from the Borrow Pit to a new turnout at the southwest corner of Highline Road and Steuber Road.

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Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





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June 25, 2024

Tule River Indian Tribe
Joey Garfield, Tribal Archaeologist
P.O. Box 589
Porterville, CA, 93258

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

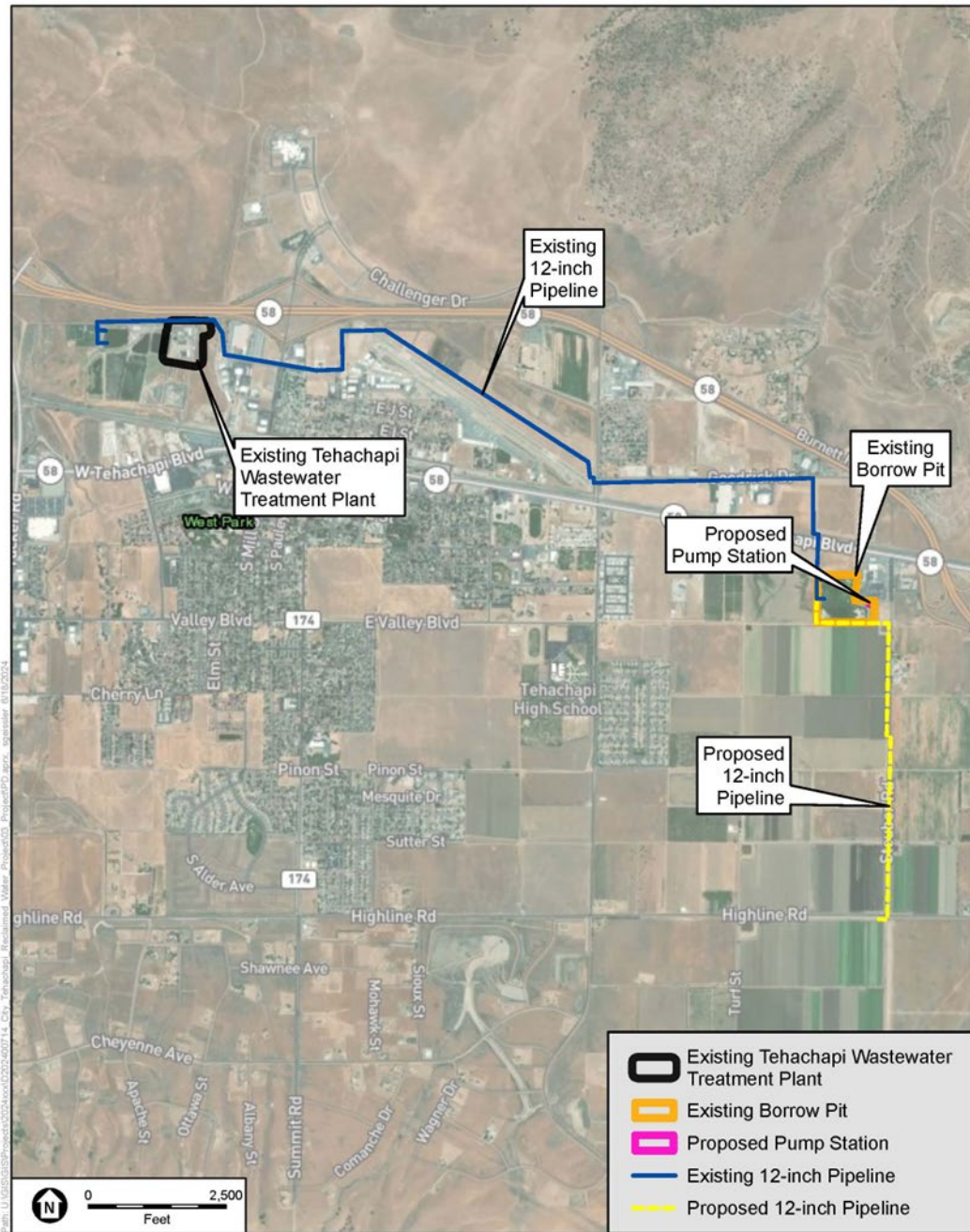
Dear Mr. Garfield:

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Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





115 South Robinson Street
Tehachapi, California 93561-1722
(661) 822-2200 📠 www.LiveUpTehachapi.com

June 25, 2024

Tule River Indian Tribe
Kerri Vera, Environmental Department
P.O. Box 589
Porterville, CA, 93258

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

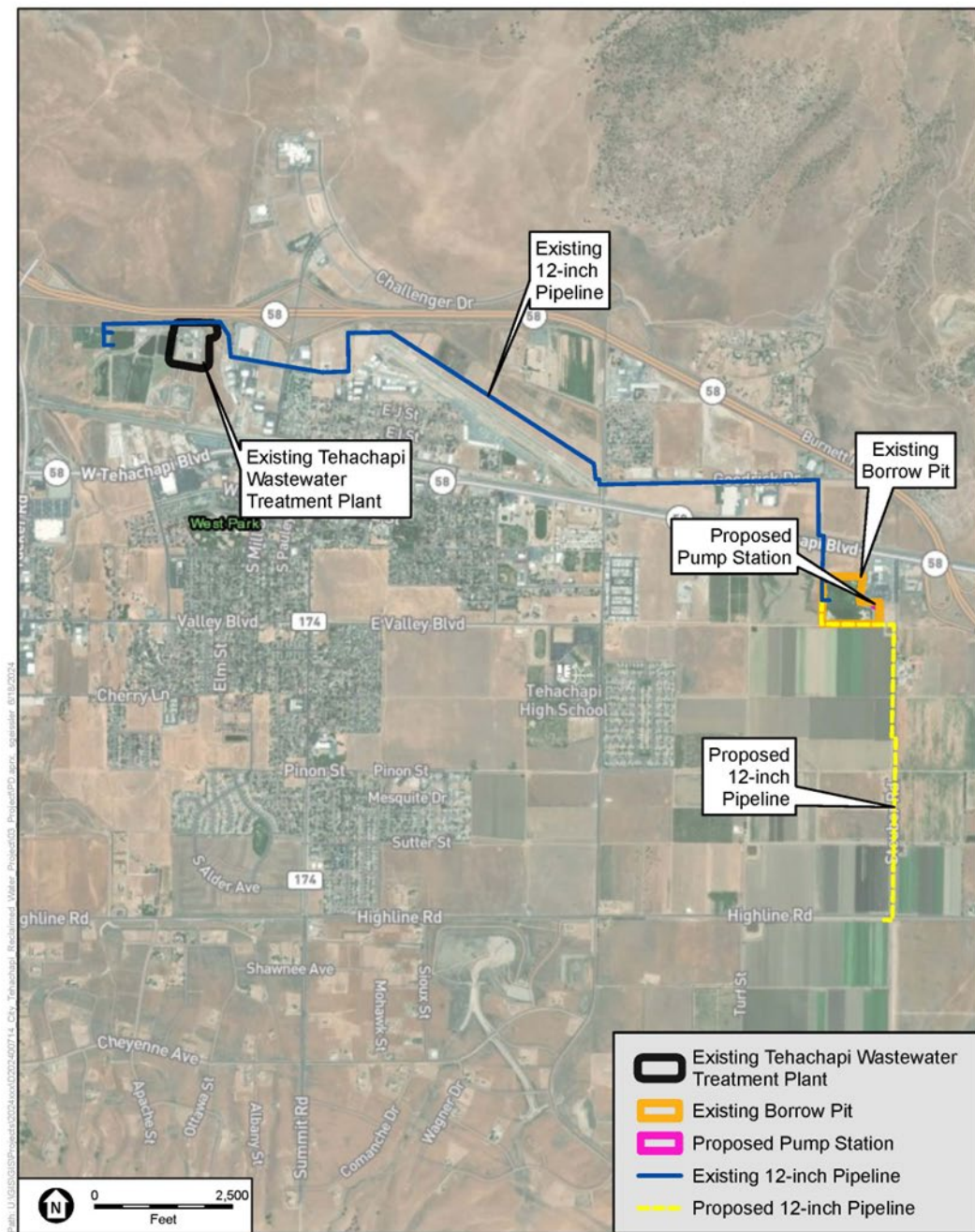
Dear Mrs. Vera:

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Tehachapi Reclaimed Water Project

Figure 1-2
Proposed Project Components





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June 25, 2024

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville, CA, 93258

RE: Proposed Reclaimed Water Project, Tehachapi, Kern County, California

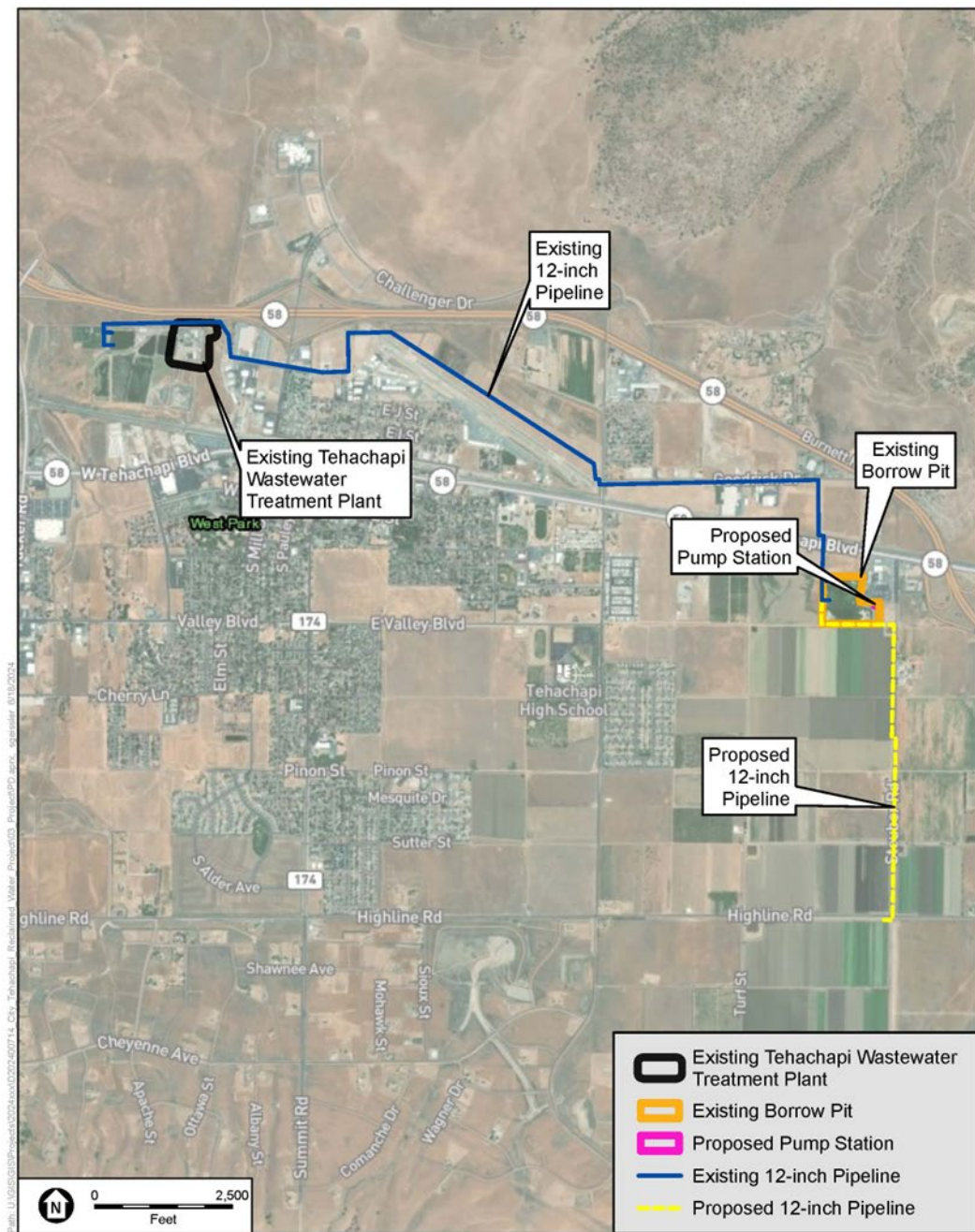
Dear Mr. Peyron:

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Tehachapi Reclaimed Water Project

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Proposed Project Components

