KERNDT

Print Form

NOV 0 9 2021

MARY B. BEDFORD
AUDITOR CONTROLLER-COUNTY CLERK
BY

Notice of Determination

To:

☐ Office of Planning and Research

U.S. Mail: P.O. Box 3044 Sacramento, CA 95812-3044

Street Address: 1400 Tenth St., Rm 113 Sacramento, GA 95814

@ County Clerk
County of: Kern County Clerk's Office
Address: 1115Truxtun Avenue
Bakersfield, CA 93301

From:

Public Agency: Lebec County Water District
Address: 323 Frazier Mountain Park Road
Lebec, CA 93243
Contact: Jessica Carrol, Off Mg/Board Clerk
Phone: (661) 248-6872

Lead Agency (if different from above):
Same
Address:

Contact:
Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse):

Project Title: Addendum FMHS/Lebec County Water District Water System Improvement Project

Project Applicant: Lebec County Water District

Project Location (include county): Lebec, Kem County

Project Description:

Please see attached Project Description.

This is to advise that the Lebec County Water District has approved the above
(S Lead Agency or ☐ Responsible Agency)

described project on 10/12/2021 and has made the following determinations regarding the above
(date)
described project.

1. The project [□ will [■' will not] have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ® A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [® was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [□ was ® was not] adopted for this project.
6. Findings [[ffl] were 0 were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:
323 Frazier Mountain ParkRogd, Lebec, CA 93243

Signature (Public Agency/ Title: Board President

Date: Oct. 8, 2-&2J, Date Received for filing at OPR:

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Notice of Environmental Document
Posted by County Clerk on 11-15-2021
and for 30 days thereafter, (Pursuant to Section 21152(C), Public Resources Code

RECEIVED WITH FEE
RECEIPT # _____

Print Form

RECEIVED
KERN COUNTY

NOV 16 2020

MARY B. BEDARD
AUDITOR CONTROLLER-COUNTY CLERK
BY _____ DEPUTY

Notice of Determination

To:

☐ Office of Planning and Research

U.S. Mail: P.O. Box 3044, Sacramento, CA 95812-3044

Street Address: 1400 Tenth St., Rm 113, Sacramento, CA 95814

☒ County Clerk
County of: Kern
Address: 1115 Truxtun Avenue
Bakersfield, CA 93301

From:
Public Agency: Lebec County Water District
Address: 323 Frazier Mountain Park Road
Lebec, CA 93243
Contact: Jessica Carroll, GM/Board Clerk
Phone: (661) 248-6872

Lead Agency (if different from above):
Same
Address: _____
Contact: _____
Phone: _____

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2020090499

Project Title: FMHS/Lebec County Water District Water System Improvement Project

Project Applicant: Lebec County Water District

Project Location (include county): Lebec, Kern County

Project Description:

Please see attached Project Description.

This is to advise that the Lebec County Water District (☒ Lead Agency or ☐ Responsible Agency) has approved the above described project on 11-10-2020 (date) and has made the following determinations regarding the above described project.

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☒ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:
323 Frazier Mountain Park Road, Lebec, CA 93243

Signature (Public Agency): _____ Title Board President

Date: 11-10-20 Date Received for filing at OPR: _____

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Notice of Environmental Document
Posted by County Clerk on 11-16-2011
and for 30 days thereafter, Pursuant to
Section 21152(C), Public Resources Code

Project Description

The Project is located in southern Kern County within the unincorporated community of Lebec, CA. The Project would be located both east and west of Interstate 5 (I-5) near Frazier Park Mountain Road and the Lebec rest area. The Project involves the construction and operation of water system improvements for the purpose of improving water quality and capacity in LCWD's water system as well as consolidating the FMHS water system with LCWD. The Project proposes to annex the territory of FMHS into the LCWD, construct necessary infrastructure and operate water system improvements necessary to improve water quality, enhance water supply reliability, expand water storage, and replace the FMHS drinking water supply by extending water service to FMHS.

The following are the components of the Project:

1) Annexation: LCWD plans to annex the territory of FMHS. Annexation would be performed through the Kern Local Agency Formation Commission (LAFCo) to implement a Sphere of Influence[1], Amendment and Annexation allowing the consolidation of the FMHS water system into the LCWD water system and facilitate the installation the infrastructure and water tank to supply clean drinking water to the high school.
2) LCWD Well No. 4 (refer to Sheet B1 of Appendix D): Drill a new well at a depth of approximately 300 feet below ground surface (bgs) with associated equipment, including a new building, diesel fuel tank and power generator.
3) Water pipeline from Well Site to Distribution System (Sheets B2 through B5): construction of approximately 0.4 miles of 8-inch diameter pipeline, including a jack and bore of a 24-inch diameter steel casing with 10-inch carrier pipeline under I-5.
4) Pressure zone interconnection pipeline on the western side of I-5 (Sheets B5 through B7): construction of approximately 0.33 linear miles of pressure zone interconnection pipeline.
5) Pipeline Along Frazier Mountain Road between Lebec Road and Cuddy Canyon Road (Sheets A1 through A6): construction of approximately 1.3 linear miles of pipeline along Frazier Mountain Road between Cuddy Canyon Road and Wainright Court to move water from the Well No. 4 to the Chimney Canyon storage tank. A booster pump station would be installed at the FMHS Well Site (see Sheet A2) that would boost the pressure to the Chimney Canyon Pressure Zone.
6) Chimney Canyon Tank Site (Sheet C1): installation of new 200,000-gallon water storage tank. The Chimney Canyon Tank site has six (6) existing tanks. The new tank would bring the total number to seven (7).
7) FMHS Water System Improvements (Sheet D1 through D4): construct approximately 1.8 linear miles of new 4-inch diameter drinking water pipeline, add a new 25-gallon per minute (gpm) booster pump station (at the FMHS Well Site), a new power line, and add a new 40,000-gallon irrigation water storage tank at FMHS campus. FMHS's existing water well would be designated for irrigation water, and water would be conveyed through the existing 6-inch diameter water pipeline to the new 40,000-gallon water storage tank for irrigation of ball fields. The existing 120,000-gallon water storage tank at FMHS would be designated for drinking water and fire protection purposes (with no cross connections between the irrigation and drinking water systems).

FMHS currently has a water system that serves approximately 300 students and staff. The water system consists of a well, transmission pipeline, 120,000-gallon storage tank, and distribution pipelines. The transmission pipeline is used to deliver water from the well to the steel storage tank. Water is diverted by gravity from the tank through a short pipe that branches off into two subsystems, namely a mainline that provides domestic water to the main school facilities by gravity, and a mainline that serves the landscaped irrigated areas (e.g.,

[1] Sphere of Influence is defined as the probable physical boundary and service area of a local agency. In this case the high school would become part of the LCWD water district boundary.

sports fields) with a booster pump. This water system delivers on average 19.3 million gallons per year of potable water and has an estimated demand for non-potable water for yards and landscaping of approximately 6.6 acres. The potential school population to be served by the system in the future, if possible, is about 500 students and staff, to be consistent with the initial estimates when the school was built.

Currently, FMHS obtains its water supply from a primary well (FMHS Well 01) located at 38793 Frazier Mountain Park Road, Lebec, CA 93243. The well was drilled in 1992, and currently violates the Safe Drinking Water Maximum Contaminant Level (state MCL) for fluoride and uranium. Because the fluoride and uranium levels exceed the state MCL, the El Tejon Unified School District (School District) — owner of the FMHS water system — has received compliance orders from the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) for each of these violations.

The Project would connect the LCWD water system to FMHS to provide drinking water for the FMHS facilities. A new booster pump station (with backup generator) would boost LCWD drinking water up to the existing 120,000-gallon located at the FMHS campus. The drinking water would be conveyed through a new 4-inch diameter transmission pipeline that would parallel the existing 6-inch diameter transmission pipeline. The existing FMHS Well 01 and existing 6-inch diameter transmission pipeline would be used strictly for irrigation at the FMHS campus. The existing pipeline would connect to a new 40,000-gallon storage tank would be constructed at the FMHS tank site to provide for irrigation water storage.

Other activities included in the Project consist of all permitting and approvals required by the Kern Local Agency Formation Commission (LAFCo) to implement a Sphere of Influence Amendment and Annexation allowing the consolidation of the FMHS water system into LCWD's water system.

Addendum to the Frazier Mountain High School/Lebec County Water District Water System Improvement Project Mitigated Negative Declaration

OCTOBER 2021

SCH NO. 2020090499

PREPARED FOR:

Lebec County Water District
323 Frazier Mountain Park Road
Lebec, CA 93243

PREPARED BY:

Provost & Pritchard Consulting Group
1800 30th Street, Suite 280
Bakersfield, CA 93301

TABLE OF CONTENTS

Chapter 1 Addendum to an Adopted Mitigated Negative Declaration 1-1
Chapter 2 Project Description 2-1
2.1 Project Background 2-1
2.1.1 Project Title 2-1
2.1.2 Lead Agency Name and Address 2-1
2.1.3 Contact Person and Phone Number 2-1
2.1.4 Project Location 2-1
2.1.5 General Plan Designation 2-2
2.1.6 Zoning 2-2
2.1.7 Project Background 2-2
2.1.8 Description of Project 2-2
Chapter 3 CEQA Analysis 3-1
3.1 Discussion 3-1
3.2 Aesthetics 3-1
3.3 Agricultural and Forestry Resources 3-1
3.4 Air Quality 3-2
3.5 Biological Resources 3-2
3.6 Cultural Resources 3-2
3.7 Energy 3-2
3.8 Geology and Soils 3-2
3.9 Greenhouse Gas Emissions 3-3
3.10 Hazards and Hazardous Materials 3-3
3.11 Hydrology and Water Quality 3-3
3.12 Land Use and Planning 3-4
3.13 Mineral Resources 3-4
3.14 Noise 3-4
3.15 Population and Housing 3-4
3.16 Public Services 3-4
3.17 Recreation 3-5
3.18 Transportation 3-5
3.19 Tribal Cultural Resources 3-5
3.20 Utilities and Service Systems 3-5
3.21 Wildfire 3-5
3.22 Conclusion 3-5

LIST OF APPENDICES

Appendix A: Initial Study/Mitigated Negative Declaration A-1

LIST OF FIGURES

Figure 2-1: Regional Location 2-3
Figure 2-2: Original IS/MND (SCH # 222020090499) Topographic Quadrangle Map 2-1
Figure 2-3: Amendment Tank Location 2-1

LIST OF TABLES

Table 2-1 2-1
Table 2-2 2-2
Table 2-3 2-2
Table 2-4 2-2

CHAPTER 1 ADDENDUM TO AN ADOPTED MITIGATED NEGATIVE DECLARATION

The Lebec County Water District (LCWD) does hereby prepare, declare, and publish the Addendum to an adopted Mitigated Negative Declaration (MND) (State Clearinghouse No. 2020090499) for the following Frazier Mountain High School/Lebec County Water District Water System Improvement Project.

This Addendum is in response to the proposed increase to the Frazier Mountain High School (FMHS) tank to 200,000 gallons (Project). This Addendum discusses the potential impacts as a result of an increase to the size and capacity of the orignial water storage tank design from 120,000 gallons. The tank size would be increased by 80,000 gallons and would be 32 feet in diameter and 40 feet in height.

LCWD has reviewed the Project and on the basis of the whole record, has determined that there is substantial evidence to support the determination that the attached original MND remains relevant in considering the environmental impacts of the project changes and that there is no substantial evidence to support a fair argument that the changes to the project, as identified in the attached addendum, would have a significant impact on the environment beyond that which was evaluated in the adopted MND. A subsequent Environmental Impact Report (EIR) or MND is not required pursuant to the California Environmental Quality Act of 1970 (Sections 21000, et. Seq., Public Resources Code of the State of California).

This addendum to the original adopted MND has been prepared pursuant to Title 14, Sections 15162 and 15164 of the California Code of Regulations.

A copy of this document and all supportive documentation may be reviewed or obtained at the Lebec County Water District's office, 323 Frazier Mountain Park Road, Lebec, CA 93243, Monday through Friday 8:00 am to 3:30 pm.

CHAPTER 2 PROJECT DESCRIPTION

2.1 PROJECT BACKGROUND

2.1.1 Project Title

Addendum to the Frazier Mountain High School/Lebec County Water District Water System Improvement Project

2.1.2 Lead Agency Name and Address

Lebec County Water District
323 Frazier Mountain Park Road
Lebec, CA 93243

2.1.3 Contact Person and Phone Number

Lead Agency Contact

Jessica Carrol
Office Manager/Clerk of the Board
(661) 248-6872

CEQA Consultant

Provost & Pritchard Consulting Group
Dena Giacomini, Environmental Project Manager
(661) 616-5900

2.1.4 Project Location

The Project is located in southern Kern County, California, Township 8N, Range 19W, Section 9; San Bernardino Base and Meridian (see ***Figure 2-1*** & ***Figure 2-2*** for location). Assessor's Parcel Numbers involved in activities included in this analysis are listed in ***Table 2-1***. The approximate latitude and longitude of the Project site is listed in ***Table 2-2***.

Table 2-1

Project Component	Assessor's Parcel Numbers Involved
FMHS water storage tank	255-560-(18, 33-36)
Note: This was identified in the original MND (SCH No. 2020090499)	

The Project is located at the following approximate latitude and longitude:

Table 2-2

Project Component	Latitude	Longitude
FMHS water storage tank	34° 47' 49" N	118° 53" 34" W
Note: This was identified in the original MND (SCH No. 2020090499)		

2.1.5 General Plan Designation

The Kern County General Plan designates the Project as follows

Table 2-3

Project Component	General Plan Designation
FMHS water storage tank	Frazier Park/Lebec Specific Plans
Note: This was identified in the original MND (SCH No. 2020090499)	

2.1.6 Zoning

The Project is zoned as follows

Table 2-4

Project Component	Zoning		
	Kern County	Tejon Mountain Village Specific Plan	Frazier Park/Lebec Specific Plan
FMHS water storage tank	Exclusive Agriculture (A)	N/A	Applicable but no zoning designation provided.
Note: This was identified in the original MND (SCH No. 2020090499)			

2.1.7 Project Background

An MND for the Project was adopted on June 15, 2021 (refer to ***Appendix A***). The MND evaluated the potential environmental impacts that would arise, as a result of project implementation. The Project tank is illustrated on ***Figure 2-3***.

2.1.8 Description of Project

The Project would change the water storage tank from a 120,000 gallon capacity tank to a 200,000 gallon capacity tank. The increased size and capacity would result in an increased footprint. The water storage tank would be approximately 32 feet in diameter and 40 feet in height. No additional changes or equipment would be needed with the Project as the original equipment required in the MND would be adequate to meet the needs of the updated water storage tank at the FMHS campus. Construction time is not anticipated to change from what was approved in the MND. The Project would continue to be designated for drinking water and fire protection purposes (with no cross connections between the irrigation and drinking water systems).

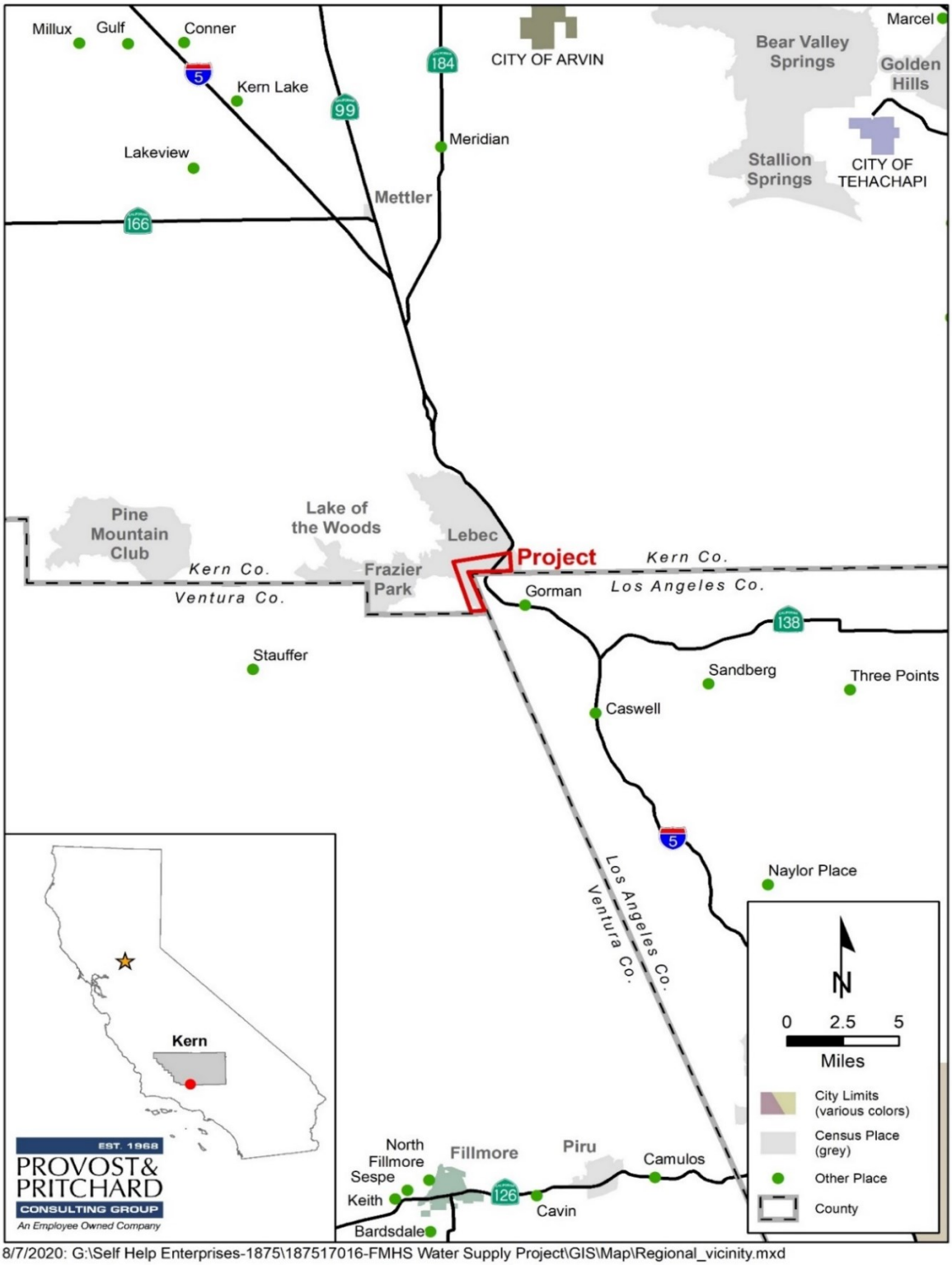


Figure 2-1: Regional Location

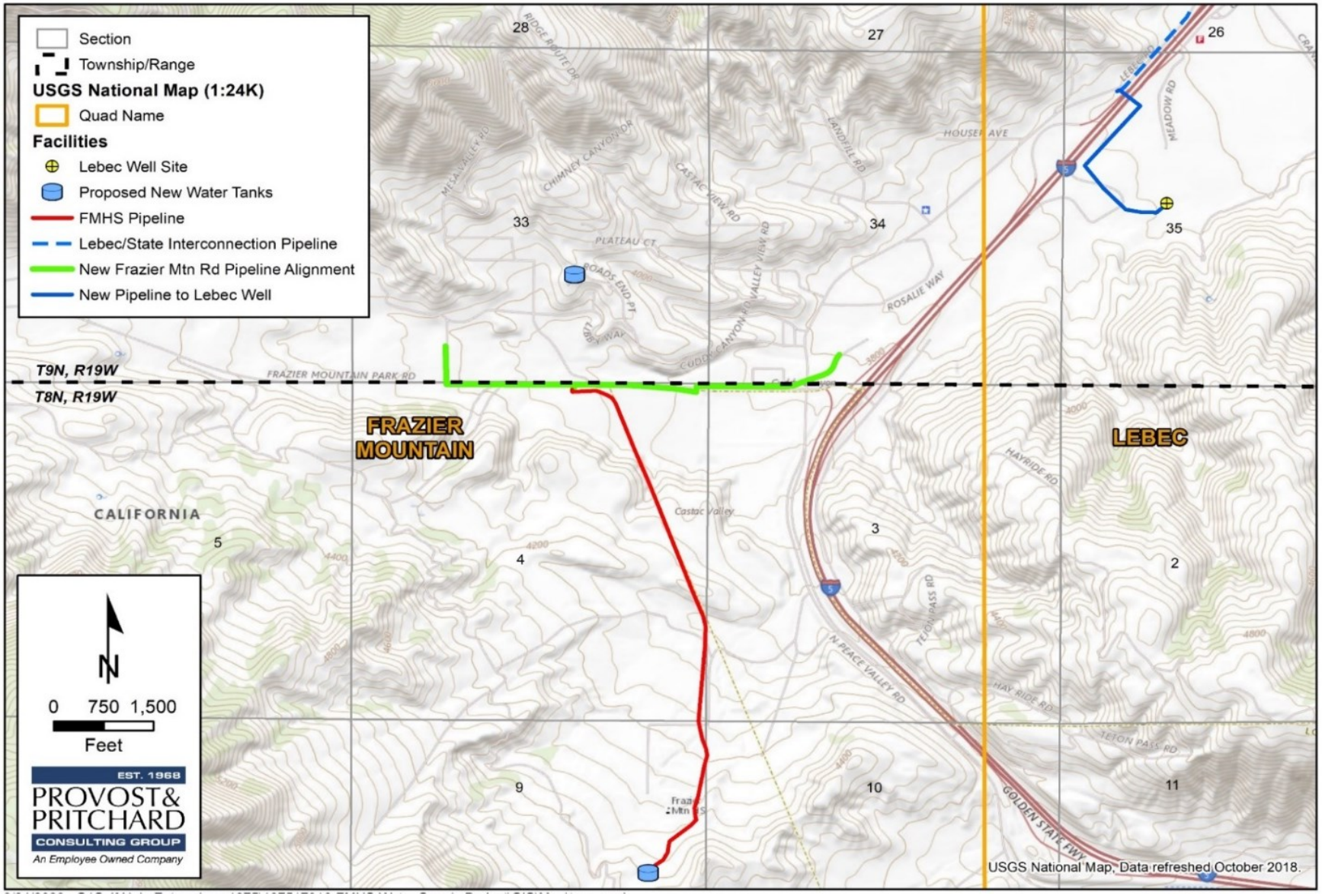


Figure 2-2: Original IS/MND (SCH # 222020090499) Topographic Quadrangle Map

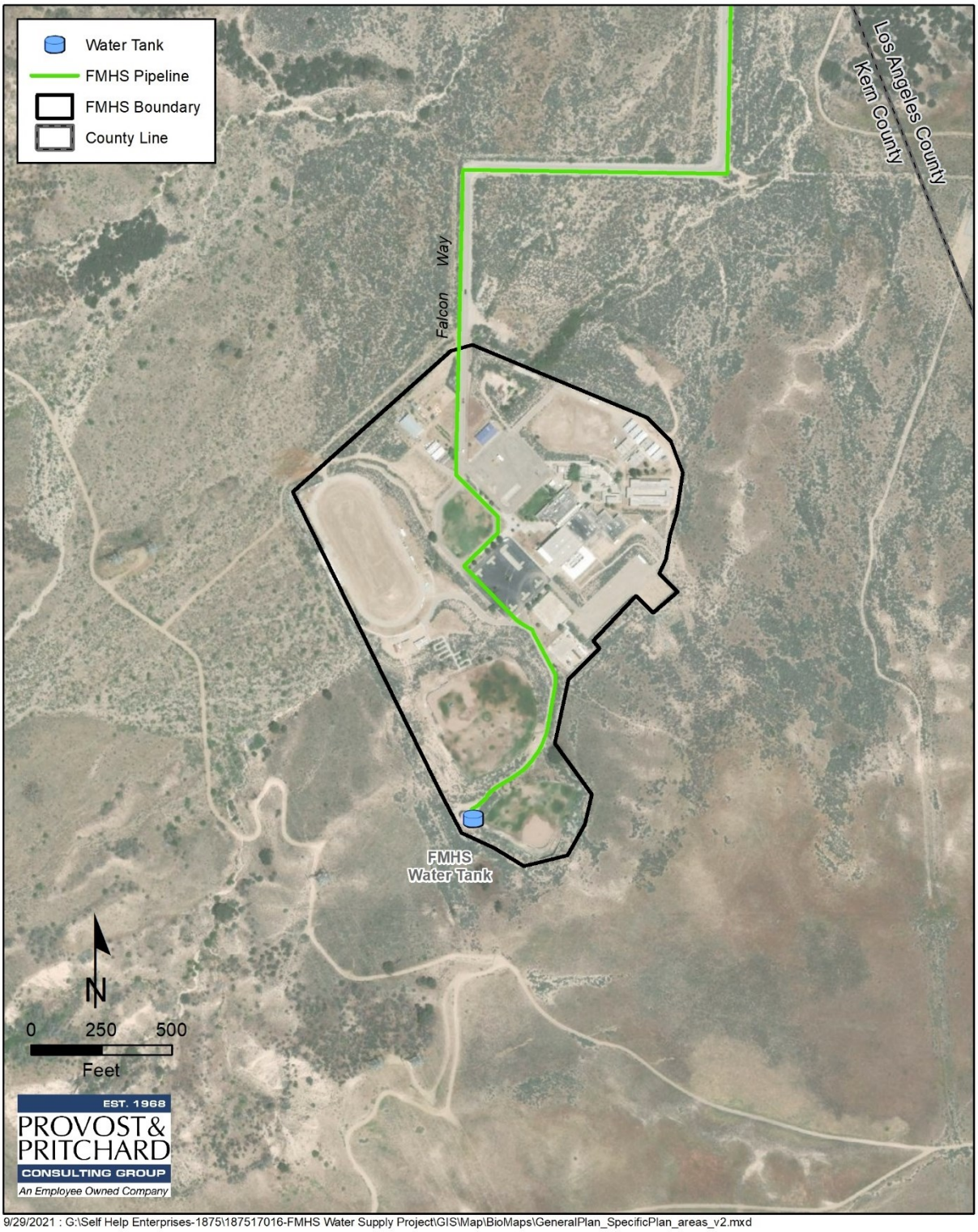


Figure 2-3: Amendment Tank Location

CHAPTER 3 CEQA ANALYSIS

Under the California Environmental Quality Act (CEQA) Guideline Section 15164, an addendum to an MND may be prepared if only minor technical changes are required or if none of the conditions identified in Guideline Section 15162 are present. In the absence of substantial evidence to support a fair argument that the project changes may result in significant environmental impacts not previously studied, an addendum to the MND is appropriate. The following review proceeds with the requirements of CEQA Guidelines Section 15162 in mind. The following discussion concludes that the conditions set forth in Section 15162 are not present, and that an addendum is appropriate documentation for the tank changes from the original Project.

3.1 DISCUSSION

The discussion in this addendum confirms that the Project changes have been evaluated for significant impacts pursuant to CEQA. The discussion is meaningfully different than a determination that a project is "exempt" from CEQA review, as the Project is not exempt. Rather, the determination here is that the potential impacts of the Project were in a previously adopted MND (i.e., the 2020 Frazier Mountain High School/Lebec County Water District Water System Improvement Project MND) and that the MND provides a sufficient and adequate analysis of the environmental impacts of the Project. While the impacts to the site are virtually indistinguishable from the current condition, because the Project would increase the size of the FMHS water storage tank to hold 200,000 gallons of water, the LCWD determined that an addendum rather than an exemption is the appropriate environmental document.

3.2 AESTHETICS

The Project would be located at an elevation of approximately 4,400 feet above mean sea level and would be approximately 32 feet in diameter and 40 feet in height. The Project would be located next to the existing tank and approximately 700 feet away from the nearest school building on the far southwest corner, behind the baseball practice fields, and nestled against the southerly hillside when viewed from the vantage point at the school buildings. The existing tank site is graded flat with hills overlooking the site. The tank area would be visually consistent with existing conditions and would not obstruct views. Predominantly, the tank would only be visible by the students and staff that attend the high school. Consistent with the original MND, the upsized tank would be painted blue, the same color as the existing tank and the official FMHS sport mascot colors. The Project would blend aesthetically with the existing structures located on the FMHS campus. Therefore, the Project would not degrade the existing visual character or quality of public views of the site or its surroundings. Impacts would remain consistent with the MND and would continue to be less than significant.

3.3 AGRICULTURAL AND FORESTRY RESOURCES

The Project would not change or alter existing zoning designations nor would they result in the loss of forest land, Williamson Act lands, or agricultural lands. Additionally, there would be no changes to the existing environment as a result of upsizing the drinking water tank. As such, impacts to agricultural resources would be the same as the approved MND, which found that no impacts would occur.

3.4 AIR QUALITY

Emissions of ozone precursor pollutants during the construction period would not exceed significance thresholds for the San Joaquin Valley Air Pollution Control District (SJVAPCD), and would therefore not contribute to air quality violations in conflict with attainment plans. Construction at the FMHS site would most likely occur during the summer months, outside of the school year. Exposure to construction emission would continue to be short-term and temporary. Operational pollutant exposures would remain minimal and only consist of maintenance vehicles driving to and from the tanks for maintenance. The approved MND identified that air quality impacts to the region would be less than significant. The Project would not substantially change the air quality impacts, therefore impacts would be consistent with the approved MND. As such, impacts would remain consistent with the MND and would continue to be less than significant.

3.5 BIOLOGICAL RESOURCES

As identified in the MND, mitigation measures would be included in the Project to bring impacts to a less than significant level. Although the overall size of the FMHS water tank will increase, the mitigation measures identified in the original MND would still apply and the upsized tank would not require additional mitigation. Therefore, impacts to biological resources would be less than significant.

3.6 CULTURAL RESOURCES

Field surveys were conducted for the original MND between September and November 2019. Although historical or archaeologiclal resources were not identified at the time of the surveys, unanticipated resources have the potential to be unearthed during gound-disturbing activites Therefore, mitigation measures were provided to address a potential unearthing of resources. The Project would not require additional mitigation measures and Impacts to cultural resources would remain less than significant.

3.7 ENERGY

Increases in the use of energy as a result of the Project would be miniscule. The Project would not conflict with current State energy efficiency or electricity supply requirements, or any local plans or programs for renewable energy or energy efficiency requirements. Impacts would not change as a result of the Project and would remain less than significant.

3.8 GEOLOGY AND SOILS

The Project is located in an area of known seismic activity, but the FMHS tank would be constructed utilizing seismic restraint designs consistent with the California Building Code. The Project would be located on a existing flat, dirt pad where a water storage tank already exists. The water storage tank would also be connected to a supervisory control and data acquisition (SCADA) control system that would identify any abnormalities prior to tank failure. The tank would be routinely inspected for required maintenance. The soils in the area are well to excessively-well drained which represents a low likelihood for liquefaction or seismic-related ground failure. Runoff from the site would collected in an existing V-ditch. The original MND has incorporated a mitigation measure in the event that paleontological resources or unique geologic features are discovered during construction. The tank is being placed in a previously distrurbed area and additional mitigation measures beyond those identified in the original MND are not required as a result of the increase in tank size; therefore impacts would be less than significant.

3.9 GREENHOUSE GAS EMISSIONS

The original MND determined that the estimated short-term and long-term greenhouse gases (GHGs) emissions would remain negligible, resulting in a less than significant impact. The Project would not alter emissions resulting from construction or operation. The SJVAPCD has determined that Project-generated GHG emissions associated with the use of fossil fuels would be fully mitigated through implementation of Air Resources Board Cap-and-Trade regulations and, therefore, would be considered to have a less than significant individual and cumulative impact on the environment. Implementation of the Project is not anticipated to conflict with any applicable plan, policy, or regulation for reducing the emissions of GHGs. Impacts would remain less than significant as a result of the Project.

3.10 HAZARDS AND HAZARDOUS MATERIALS

Construction of the Project would involve the use of hazardous materials associated with construction equipment, such as diesel fuel, lubricants, and solvents. However, the contractor is required to and would implement a Storm Water Pollution Prevention Plan (SWPPP) and would comply with all California Occupational Safety and Health Administration (Cal/OSHA) regulations regarding regular maintenance and inspection of equipment, spill prevention, and spill remediation in order to reduce the potential for incidental release of pollutants or hazardous substances onsite. Furthermore, any potential accidental hazardous materials spills during construction are the responsibility of the contractor to remediate in accordance with industry best management practices and State and county regulations. The operational phase of the Project would not involve the use or transport of hazardous materials. As stated in the original MND, the Project does not involve land that is listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Control Substances. The Project is also not located within two miles of a public airport or a public use airport. The Project would not alter the findings of the original MND and therefore impacts would remain less than significant.

3.11 HYDROLOGY AND WATER QUALITY

The original MND did not identify any potentially significant hydrology and water quality impacts. The Project would not adversely affect surface or ground water quality. Project operations are needed to improve water quality and comply with drinking water standards. The Project does not involve waste discharge. Impacts would be less than significant.

The overall water demand for FMHS would remain similar to current baseline conditions. This is consistent with Kern County's projected growth rate for water usage, less than 1 percent. Both the residual growth in the area and water used by the school are existing conditions, therefore, expanded water size would be considered negligible. Therefore, the Project would not significantly decrease groundwater supplies nor interfere substantially with groundwater recharge than what was already discussed in the original MND.

The Project may result in minor alterations in drainage patterns as a result of grading and backfilling areas of construction. However, the school has an extensive concrete V-ditch drainage system that captures stormwater and carries it downhill around the school. The tank area would be returned to pre-construction conditions and match the existing grade to allow storm water to continue flow in the same historic manner.

In order to minimize erosion and run-off during construction activities, a SWPPP would be implemented, and the contractor shall be required to comply with all Cal/OSHA regulations regarding regular maintenance and inspection of equipment, spill prevention, and spill remediation in order to reduce the potential for

incidental release of pollutants or hazardous substances onsite. Furthermore, any potential sources of polluted runoff, such as accidental hazardous materials spills that may occur during construction, shall be remediated in accordance with industry best management practices and State and county regulations. Accordingly, impacts resulting from insignificant alterations to drainage patterns and the potential for the Project to result in impacts related to inundation by seiche, tsunami, or mudflow would be less than significant. Project activities are in response to an exceedance of water quality maximum contaminant levels for uranium and fluoride. Therefore, Project activities would provide compliance with water quality control standards once the Project is complete and meet drinking water health and safety requirements. It is anticipated that the Project and LCWD would be subject to, and held in compliance with, all applicable water quality control and sustainable groundwater management plans. The Project would therefore maintain a less than significant impact.

3.12 LAND USE AND PLANNING

The storage capacity of the tank is proposed to be increased from 120,000 gallons to 200,000 gallons. The increased storage capacity would in turn increase the size of the water tank itself. The General Plan and zoning designation for the site would remain unchanged (see ***Table 2-3*** & ***Table 2-4***). The Project would not divide an established community, nor would it conflict with any applicable habitat conservation plan or natural community conservation plan. Thus, impacts to land use and planning are consistent with the approved MND and no impacts would occur.

3.13 MINERAL RESOURCES

The Project is not in a category of projects that would affect the availability of a mineral resource or access to mineral resources. Therefore, impacts to mineral resources are consistent with the approved MND and no impacts would occur.

3.14 NOISE

The Project would not add to construction noise levels. There would be no change in terms of construction noise. The tank would generally be constructed during the summer months when the students are out of school, thereby limiing sensitive receptors. Impacts to noise are consistent with the approved MND. Impacts would remain less than significant.

3.15 POPULATION AND HOUSING

The Project involves water system improvements of LCWD to deliver clean drinking water to FMHS. The Project would continue to provide a new clean water source where an existing water source currently exists and would allow for minor increases in water delivery (less than 1% annual growth is anticipated for the community of Lebec). The Project would be consisitent with the approved MND, which found that the Project would be beneficial to users by providing clean drinking water, and thus, impacts would be less than significant.

3.16 PUBLIC SERVICES

The Project would continue to not significantly impact public services in the jurisdiction related to fire protection, police protection, parks, or landfill facilities. The Project would provide a new water source for

an existing school, increase the capacity and redundancy of an existing water purveyor and provide improved water service for fire protection. The students, associated staff, and residents serviced are currently residents of the community for which the listed services are currently provided. The Project would would maintain less than significant impacts as determined in the original MND.

3.17 RECREATION

The Project would not change the impacts to recreation. The Project would continue to have no effect on neighborhood and regional parks or other recreational facilities. The Project itself does not involve recreational facilities and it would not require the construction or expansion of existing recreational facilities. Project impacts to recreation would remain the same as described in the original MND, and there would be no impact.

3.18 TRANSPORTATION

The Project would not result in a significant increase in vehicle miles traveled. The Project would have no impact to CEQA Guidelines section 15064.3 Subdivision (b) and the Project would still not result in inadequate emergency access. Project impacts to transportation would remain the same as described in the original MND. There would be no additional impacts.

3.19 TRIBAL CULTURAL RESOURCES

The Project is located in an area that has been previously disturbed. The original MND stated that representatives of potentially affected tribes were notified of the proposal and the notified tribes did not express any concern. As a result, less than significant impacts were expected. In the event that human remains are discovered, a best practice mitigation measure was incorporated into the MND. The Project would not alter impacts to tribal cultural resources. Impacts are consistent with the approved MND. There would be no additional impacts.

3.20 UTILITIES AND SERVICE SYSTEMS

The Project would not result in significant impacts to utilities and service systems. The Project would provide a cleaner and more reliable water system for FMHS. Impacts would remain less than significant as determined in the original MND.

3.21 WILDFIRE

As stated in the MND, the Project is located in a state responsibility area and portions of the Project lie in an area determined to a Very High Fire Hazard Severity Zone. The MND determined that the Project as a whole would reduce such risks by adding the additional tank allowing stored water to be used for fire suppression. Impacts would remain consistent with the MND. Impacts would remain less than significant.

3.22 CONCLUSION

The following identifies the standards set forth in Section 15162 as they relate to the project. The text in italics that follows the provisions of the law relate to the Project.

1. No substantial changes are proposed in the project which would require major revisions of the previous MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

The Project would change the proposed water storage tank from a 120,000 gallon capacity tank to a 200,000 gallon capacity tank. The increase capacity would result in an increase footprint. The water storage tank would be approximately 32 feet in diameter and 40 feet in height. No additional changes or equipment would be needed with the Project as the original equipment required in the MND would be adequate. All mitigation measures adopted with the MND would apply to this project.

2. No substantial changes have occurred with respect to circumstances under which the project is undertaken that would require major revisions of the previous MND due to the involvement of new significant environmental effect or a substantial increase in the severity of previously identified significant effects.

The Project would increase the size and capacity of the FMHS water storage tank to hold 200,000 gallons of water versus 120,000 gallons of water. The extra water capacity would increase the amount of immediate available water. The increased footprint would be the only change in terms of impacts, but the water storage tank would be located on an existing water tank site nestled in the existing hillside. There is an existing water storage tank painted blue and the upsized 200,000 water storage tank will maintain the blue-painted exterior. The site would be visually consistent with existing conditions and would not substantially obstruct views. The impact would be insignificant and unsubtantial in nature.

3. No new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous MND was certified as complete or adopted, shows any of the following:

    a. The project will have one or more significant effects not discussed in the previous MND;

    As the Project uses existing equipment and construction time will stay the same, and would not result in additional hazards, the previous MND remains adequate.

    b. Significant effects previously examined will be substantially more severe than shown in the previous MND;

    As concluded in this addendum, the increased size and capacity of the water storage tank at the FMHS campus would not substantially increase risk or result in more severe impacts than evaluated in the previous MND. All other operational characteristics of the Project remain unchanged from those evaluated in the previous MND.

    c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative, or;

    All the original mitigation measures would apply to the Project. No new mitigation measures are necessary.

    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous MND would substantially reduce one or more significant effects on the

environment, but the project proponents decline to adopt the mitigation measure or alternative.

The existing mitigation measures in the MND reduce all impacts to less than significant. No additional mitigation measures are warranted.

As indicated in this Addendum, the impacts of the Project do not represent a substantial change to the original adopted MND, nor does it have any substantial changes with respect to the circumstances under which the project is undertaken, that would require major revisions to the original adopted MND. Analysis of the Project shows that there are no new significant environmental effects or a substantial increase in the severity of previously identified significant effects as a result of the Project.

Impacts beyond those identified and analyzed in the adopted MND would not be expected to occur as a result of the Project, and the Project would remain subject to all applicable previously required mitigation measures from the adopted MND. The Project would not result in any new information of substantial importance that would have new, more severe impacts, new mitigation measures, or new or revised alternatives from what was identified in the original adopted MND.

Based on the record as a whole, there is no substantial evidence that the Project would result in significant environmental impacts not previously studied in the MND and, accordingly, the project changes would not result in any conditions identified in CEQA Guidelines Section 15162. Thus, a supplemental or subsequent EIR or MND is not required for the Project.

Appendix A: Initial Study/Mitigated Negative Declaration

Frazier Mountain High School/Lebec County Water District Water System Improvement Project

Initial Study/Mitigated Negative Declaration
September 2020

Prepared for:
Lebec County Water District



Prepared by:
Provost & Pritchard Consulting Group
1800 30th St Ste 280
Bakersfield Ca 93301

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

COPYRIGHT 2020 by PROVOST & PRITCHARD CONSULTING GROUP
ALL RIGHTS RESERVED

Provost & Pritchard Consulting Group expressly reserves its common law copyright and other applicable property rights to this document. This document is not to be reproduced, changed, or copied in any form or manner whatsoever, nor are they to be assigned to a third party without first obtaining the written permission and consent of Provost & Pritchard Consulting Group In the event of unauthorized reuse of the information contained herein by a third party, the third party shall hold the firm of Provost & Pritchard Consulting Group harmless, and shall bear the cost of Provost & Pritchard Consulting Group's legal fees associated with defending and enforcing these rights.

Report Prepared for:

Lebec County Water District
323 Frazier Mountain Park Road
Lebec, CA 93243

Contact:
Jessica Carrol, General Manager/Clerk of the Board
(661) 248-6872

Report Prepared by:

Provost & Pritchard Consulting Group
Louise Palmer, AICP, Senior Planner
Dena Giacomini, Senior Planner
Jeffrey O'Neal, AICP, Senior Planner
Mary E. Beatie, Senior Planner, QA/QC
Hilary Malveaux, Assistant Planner
Mallory Serrao, GIS
Jackie Lancaster, Administrative Support

Contact:
Jeffrey O'Neal, AICP
(661) 616-5900

Table of Contents

Chapter 1 Introduction 1-9
1.1 Regulatory Information 1-9
1.2 Document Format 1-9
Chapter 2 Project Description 2-1
2.1 Project Title 2-1
2.2 Project Purpose 2-1
2.3 Project Details 2-1
2.3.1 Lead Agency Name and Address 2-5
2.3.2 Project Location 2-5
2.3.3 Latitude and Longitude 2-5
2.3.4 General Plan Designation 2-6
2.3.5 Zoning 2-6
2.3.6 Other Public Agencies Whose Approval May Be Required 2-7
Chapter 3 Impact Analysis 3-1
3.1 Environmental Factors Potentially Affected 3-1
3.2 Aesthetics 3-2
3.2.1 Environmental Setting and Baseline Conditions 3-2
3.2.2 Impact Assessment 3-2
3.3 Agriculture and Forestry Resources 3-5
3.3.1 Environmental Setting and Baseline Conditions 3-5
3.3.2 Impact Assessment 3-6
3.4 Air Quality 3-8
3.4.1 Environmental Setting and Baseline Conditions 3-8
3.4.2 Impact Assessment 3-12
3.5 Biological Resources 3-15
3.5.1 Environmental Setting and Baseline Conditions 3-15
3.5.2 Impact Assessment 3-30
3.6 Cultural Resources 3-36
3.6.1 Environmental Setting and Baseline Conditions 3-36
3.6.2 Impact Assessment 3-36
3.7 Energy 3-38
3.7.1 Environmental Setting and Baseline Conditions 3-38

3.7.2 Impact Assessment 3-38
3.8 Geology and Soils 3-39
3.8.1 Environmental Setting and Baseline Conditions 3-39
3.8.2 Impact Assessment 3-41
3.9 Greenhouse Gas Emissions (GHG) 3-46
3.9.1 Environmental Setting and Baseline Conditions 3-46
3.9.2 Impact Assessment 3-47
3.10 Hazards and Hazardous Materials 3-50
3.10.1 Environmental Setting and Baseline Conditions 3-50
3.10.2 Impact Assessment 3-51
3.11 Hydrology and Water Quality 3-53
3.11.1 Impact Assessment 3-53
3.12 Land Use and Planning 3-56
3.12.1 Environmental Setting and Baseline Conditions 3-56
3.12.2 Impact Assessment 3-56
3.13 Mineral Resources 3-58
3.13.1 Impact Assessment 3-58
3.14 Noise 3-59
3.14.1 Environmental Setting and Baseline Conditions 3-59
3.14.2 Impact Assessment 3-60
3.15 Population and Housing 3-61
3.15.1 Impact Assessment 3-61
3.16 Public Services 3-62
3.16.1 Environmental Setting and Baseline Conditions 3-62
3.16.2 Impact Assessment 3-63
3.17 Recreation 3-64
3.17.1 Impact Assessment 3-64
3.18 Transportation 3-65
3.18.1 Impact Assessment 3-65
3.19 Tribal Cultural Resources 3-67
3.19.1 Environmental Setting and Baseline Conditions 3-67
3.19.2 Impact Assessment 3-68
3.20 Utilities and Service Systems 3-69
3.20.1 Impact Assessment 3-69
3.21 Wildfire 3-71

3.21.1 Environmental Setting and Baseline Conditions 3-71
3.21.2 Impact Assessment 3-73
3.22 CEQA Mandatory Findings of Significance 3-75
3.23 Determination: (To be completed by the Lead Agency) 3-77
Chapter 4 Mitigation Monitoring and Reporting Program 4-1
Chapter 5 References 5-1

List of Appendices

Appendix A: CalEEMod -Air Quality and Greenhouse Emissions Results
Appendix B: Biological Resources Report
Appendix C: Cultural Resources Report
Appendix D: Proposed Facility Layouts

List of Figures

Figure 2-1. Regional Location....2-8
Figure 2-2. Topographic Quadrangle Map....2-9
Figure 2-3. Map of Project Components....2-10
Figure 2-4. General Plan Land Use Designation Map....2-11
Figure 2-5. Zone District Map....2-12
Figure 3-1. Farmland Designation Map....3-7
Figure 3-2. Alquist-Priolo Earthquake Fault Map....3-42
Figure 3-3. Fire Hazard Severity Map....3-72

List of Tables

Table 2-1. Project Assessor Parcels....2-5
Table 2-2. Project Latitude/Longitude....2-5
Table 2-3. Project General Plan Designations....2-6
Table 2-4. Project Zoning....2-6
Table 2-5. Public Agencies Whose Approval May be Required....2-7
Table 3-1. Summary of Ambient Air Quality Standards and Attainment Designation....3-10
Table 3-2. Unmitigated Short-Term Project Level Construction Emissions....3-11
Table 3-3. Unmitigated Long-Term Operational Emissions....3-12
Table 3-4. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity....3-16
Table 3-5. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity....3-24
Table 3-6. Project Soil Characteristics....3-40
Table 3-7. Short-Term Construction-Generated GHG Emissions....3-47
Table 3-8. Project Operational-Year 2023 GHG Emissions....3-48
Table 3-9. Existing Land Use, General Plan, and Zoning....3-56
Table 4-1. Mitigation Monitoring and Reporting Program....4-2

Acronyms & Abbreviations

AB	Assembly Bill
Acronym	Description
AF	acre-foot
ALUCP	Airport Land Use Compatability Plan
amsl	above mean sea level
AQP	Air Quality Plan
BAU	Business as Usual
bgs	below ground surface
BPS	Best Performance Standards
C_2H_3Cl	Vinyl Chloride
Cal/OSHA	California Occupational Safety and Health Administration
CalEPA	California Environmental Protection Agency
CAP	Climate Action Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2e	carbion dioxide equivalent
CSUB	California State University, Bakersfield
dBA	A-weighted decibels
DDW	Division of Drinking Water
District	Lebec County Water District
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EIR	Einvironmental Impact Review
EOC	Emergency Operations Center
EPA	Environmental Protection Agency

FMHS ..... Frazier Mountain High School
FMMP ..... Farmland Mapping and Monitoring Program
ft/yr ..... feet per year
GAMAQI ..... Guidelines for Assessing and Mitigating Air Quality Impacts
GC ..... Government Code
GHG ..... greenhouse gases
gpm ..... gallons per minute
GSA ..... Groundwater Sustainability Agency
GSP ..... Groundwater Sustainability Plan
H_2S ..... hydrogen sulfide
hp ..... horsepower
I-5 ..... Interstate 5
IS ..... Initial Study
IS/MND ..... Initial Study/Mitigated Negative Declaration
LAFCo ..... Local Agency Formation Commission
LCWD ..... Lebec County Water District
MCL ..... maximum contaminant level
mg/L ..... milligram per liter
MMRP ..... Mitigation Monitoring and Reporting Program
MRZ ..... Mineral Resource Zone
$MTCO_2e$ ..... metric tones of carbon dioxide equivalent
NAAQS ..... National Ambient Air Quality Standards
NAHC ..... Native American Heritage Commission
ND ..... Negative Declaration
NO_2 ..... nitrogen dioxide
NO_X ..... nitrogen oxides
O_3 ..... ozone
Pb ..... lead
PM_{10} ..... particulate matter less than 10 microns in diameter
$PM_{2.5}$ ..... particulate matter less than 2.5 microns in diameter
ppm ..... parts per million
PRC ..... Public Resources Code
ROG ..... reactive organic gases
SCE ..... Southern California Edison
SJVAB ..... San Joaquin Valley Air Basin

SJVAPCD..... San Joaquin Valley Air Pollution Control Distirct
SO_2 .....sulfur dioxide
SO_4 .....sulfates
SR .....State Route
SSJVAIC..... Southern San Joaquin Valley Archaeological Information Center
SWPPP.....Stormwater Pollution Prevention Permit
SWRCB.....State Water Resources Control Board
TDS .....total dissolved solids
USACE.....U.S. Army Corps of Engineers
VMT..... vehicle miles traveled
VOC..... volatile organic compounds
$\mu g/m^3$..... micrograms per cubic meter

This page left intentionally blank.

Chapter 1 Introduction

Provost & Pritchard Consulting Group (Provost & Pritchard) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) on behalf of Lebec County Water District (LCWD or District) to address the environmental effects of the Frazier Mountain High School (FMHS)/LCWD water system improvement project (Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000, *et seq*. The District is the CEQA lead agency for this proposed Project.

The site and the proposed Project are described in detail in the **Chapter 2 Project Description**.

1.1 Regulatory Information

An Initial Study (IS) is a document prepared by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with California Code of Regulations Title 14 (Chapter 3, Section 15000, *et seq*.) — also known as the CEQA Guidelines — Section 15064 (a)(1) states that an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant levels. A negative declaration (ND) may be prepared instead if the lead agency finds that there is ***no*** substantial evidence in light of the whole record that the project may have a significant effect on the environment. An ND is a written statement describing the reasons why a proposed project, not otherwise exempt from CEQA, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a ND or Mitigated ND (MND) shall be prepared for a project subject to CEQA when either:

a. The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed project may have a significant effect on the environment, or

b. The IS identified potentially significant effects, but:

    1. Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed IS/MND is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

    2. There is no substantial evidence, in light of the whole record before the agency, that the proposed project *as revised* may have a significant effect on the environment.

1.2 Document Format

This IS/MND contains five chapters and four appendices**. Chapter 1 Introduction**, provides an overview of the proposed project and the CEQA process. **Chapter 2 Project Description**, provides a detailed description of proposed project components and objectives. **Chapter 3 Impact Analysis**, presents the CEQA checklist and environmental analysis for all impact areas, mandatory findings of significance, and feasible mitigation measures**. Chapter 4 Mitigation Monitoring and Reporting Program** presents a listing of the mitigation measures, time and frequency of monitoring, agency responsible for monitoring, and method of verifying compliance**. Chapter 5 References**, provides a listing of works cited and relied upon in the preparation of the environmental analysis. **Appendix A** includes the CalEEMod air quality and greenhouse emissions modeling

output data; **Appendix B** includes the biological evaluation; **Appendix C** includes the cultural evaluation and **Appendix D** includes Proposed Facility Layout.

If the Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the Project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts and recommends appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level.

Chapter 2 Project Description

2.1 Project Title

Frazier Mountain High School/Lebec County Water District Water System Improvement Project

2.2 Project Purpose

The proposed Project is needed to provide safe drinking water to existing customers. To meet water quality standards, LCWD needs to provide two new storage tanks, a new well, and pipeline infrastructure connecting the well to the tanks. This proposed Project does not intend to expand water services to new areas within its' District, but to meet water quality standards for fluoride and uranium. This Project is not to accommodate future growth in the area. If at such time additional water resources may be necessary for future growth, LCWD would provide a documentation to meet additional CEQA and Kern County General Plan requirements and comply with all federal, State, and local regulations.

2.3 Project Details

The Project is located in southern Kern County within the unincorporated community of Lebec, CA. The Project would be located both east and west of Interstate 5 (I-5) near Frazier Park Mountain Road and the Lebec rest area (see **Figure 2-1** & **Figure 2-2**). The Project involves the construction and operation of water system improvements for the purpose of improving water quality and capacity in LCWD's water system as well as consolidating the FMHS water system with LCWD. The Project proposes to annex the territory of FMHS into the LCWD, construct necessary infrastructure and operate water system improvements necessary to improve water quality, enhance water supply reliability, expand water storage, and replace the FMHS drinking water supply by extending water service to FMHS.

The components of the Project's water system improvements are illustrated on **Figure 2-3**. The following are the components of the Project (refer to **Appendix D** for detailed layouts of the proposed facilities):

1) Annexation: LCWD plans to annex the territory of FMHS. Annexation would be performed through the Kern Local Agency Formation Commission (LAFCo) to implement a Sphere of Influence[1], Amendment and Annexation allowing the consolidation of the FMHS water system into the LCWD water system and facilitate the installation the infrastructure and water tank to supply clean drinking water to the high school.
2) LCWD Well No. 4 (refer to Sheet B1 of **Appendix D**): Drill a new well at a depth of approximately 300 feet below ground surface (bgs) with associated equipment, including a new building, diesel fuel tank and power generator.
3) Water pipeline from Well Site to Distribution System (Sheets B2 through B5): construction of approximately 0.4 miles of 8-inch diameter pipeline, including a jack and bore of a 24-inch diameter steel casing with 10-inch carrier pipeline under I-5.
4) Pressure zone interconnection pipeline on the western side of I-5 (Sheets B5 through B7): construction of approximately 0.33 linear miles of pressure zone interconnection pipeline.
5) Pipeline Along Frazier Mountain Road between Lebec Road and Cuddy Canyon Road (Sheets A1 through A6): construction of approximately 1.3 linear miles of pipeline along Frazier Mountain Road

[1] Sphere of Influence is defined as the probable physical boundary and service area of a local agency. In this case the high school would become part of the LCWD water district boundary.

between Cuddy Canyon Road and Wainright Court to move water from the Well No. 4 to the Chimney Canyon storage tank. A booster pump station would be installed at the FMHS Well Site (see Sheet A2) that would boost the pressure to the Chimney Canyon Pressure Zone.

6) Chimney Canyon Tank Site (Sheet C1): installation of new 200,000-gallon water storage tank. The Chimney Canyon Tank site has six (6) existing tanks. The new tank would bring the total number to seven (7).
7) FMHS Water System Improvements (Sheet D1 through D4): construct approximately 1.8 linear miles of new 4-inch diameter drinking water pipeline, add a new 25-gallon per minute (gpm) booster pump station (at the FMHS Well Site), a new power line, and add a new water storage tank up to 120,000 gallons at FMHS campus. FMHS's existing water well would be designated for irrigation water, and water would be conveyed through the existing 6-inch diameter water pipeline to the water storage tank for irrigation of ball fields. The other 120,000-gallon water storage tank at FMHS would be designated for drinking water and fire protection purposes (with no cross connections between the irrigation and drinking water systems).

LCWD was formed in 1967 and provides water service to approximately 300 residential homes, two mobile home parks, more than 50 commercial businesses, as well as the northbound and southbound Caltrans Interstate 5 (I-5) rest stops near the unincorporated area of Lebec. The District delivers between 51 and 68 million gallons (MG) of water annually and has a service area of approximately 1,500 acres. The approximate population served by the District is 1,000 persons, based on the number of residential and mobile home connections and average household size (2.5 capita per household) in the 2016 census tract.

LCWD owns a total of four water supply wells, three of which are currently in service. The three wells that are currently in operation are the Chimney Canyon, State and Lebec wells. The Chimney Canyon Well (drilled in 1974) The Chimney Canyon Well currently exceeds the California Environmental Protection Agency (CalEPA) safe drinking water Maximum Contaminant Levels (MCL) for fluoride and uranium. Because the fluoride and uranium levels exceed the MCLs at the Chimney Canyon Well, LCWD has been issued Compliance Order No. 03_19_16R_002, dated January 7, 2016. Under the Compliance Order, LCWD is required to develop and implement a plan to resolve the fluoride and uranium MCL violations and ensure that water served to current consumers meets all applicable drinking water standards; this Project is part of the plan to resolve these violations. The other two LCWD wells are much older than the Chimney Canyon Well. The Lebec Well (Well No. 1), was drilled in about 1950 and is considered at risk of failure because of its age. The State Well (Well No. 2) was drilled in 1960 and is also considered at risk because of its age. Also, the LCWD wells do not have emergency power available.

Under a SWRCB Safe Drinking Water State Revolving Fund (SDWSRF) Planning Grant, a study was performed to determine water system improvements needed to address the water quality issue (and Compliance Order), enhance water supply reliability, and address other improvements for long-term operation of the water system. Under this Planning Grant, a test well was drilled, and its water quality and quantity indicate promising results; it is expected the proposed well (Well No. 4) would yield between 250 and 500 gpm and meet primary drinking water standards. The Well No. 4 site would be equipped with chlorination equipment and electrical and control equipment housed within a building. A portable emergency generator with diesel fuel storage for a 24-hour operating period would be located on site to provide backup power when needed.

LCWD's water pipelines also require significant improvements to convey water to the three main pressure zones in the District. The first pipeline would connect Well No. 4 to the existing water distribution system on the westside of Interstate 5 (I-5). The second pipeline has an alignment along Lebec Road and would interconnect the State Well Pressure Zone to the Lebec Well Pressure Zone to improve water system reliability should the Lebec Well be out of service. The third pipeline would be constructed along Frazier Mountain Park Road to convey water from the State Well pressure zone to the Chimney Canyon Well Pressure Zone. The FMHS's existing well site is located midway along this third pipeline's alignment and would be the location for

a booster pump station (with backup generator) that would boost water pressure to the Chimney Canyon Well Pressure Zone level. This well site is also the location for the new drinking water service to the FMHS.

LCWD also requires significant improvements to its water storage capacity. All of the LCWD's water storage tank sites consist of prefabricated steel tanks which are aging. Additionally, the tanks are not seismically restrained, thus leaving the tanks prone to severe damage due to a seismic event. A major seismic event would cripple the LCWD's ability to store and deliver water to its residents and businesses. The Chimney Canyon Tank Site is the most important water storage site in LCWD. This site has the highest elevation of all the primary pressure zone water storage sites, and therefore can "push" water to the majority of the consumers in the event of an emergency. This site is vulnerable to a seismic event, has insufficient storage volume for emergencies, and the site is not efficiently utilized. These reasons support the necessity of upgrading this site with additional storage that is designed to meet current water tank seismic codes. Therefore, the proposed project includes the construction of a 200,000-gallon steel tank on the open area of the existing Chimney Canyon Tank Site.

FMHS currently has a water system that serves approximately 300 students and staff. The water system consists of a well, transmission pipeline, 120,000-gallon storage tank, and distribution pipelines. The transmission pipeline is used to deliver water from the well to the steel storage tank. Water is diverted by gravity from the tank through a short pipe that branches off into two subsystems, namely a mainline that provides domestic water to the main school facilities by gravity, and a mainline that serves the landscaped irrigated areas (e.g., sports fields) with a booster pump. This water system delivers on average 19.3 million gallons per year of potable water and has an estimated demand for non-potable water for yards and landscaping of approximately 6.6 acres. The potential school population to be served by the system in the future, if possible, is about 500 students and staff, to be consistent with the initial estimates when the school was built.

Currently, FMHS obtains its water supply from a primary well (FMHS Well 01) located at 38793 Frazier Mountain Park Road, Lebec, CA 93243. The well was drilled in 1992, and currently violates the Safe Drinking Water Maximum Contaminant Level (state MCL) for fluoride and uranium. Because the fluoride and uranium levels exceed the state MCL, the El Tejon Unified School District (School District) — owner of the FMHS water system — has received compliance orders from the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) for each of these violations.

The Project would connect the LCWD water system to FMHS to provide drinking water for the FMHS facilities. A new booster pump station (with backup generator) would boost LCWD drinking water up to the existing 120,000-gallon located at the FMHS campus. The drinking water would be conveyed through a new 4-inch diameter transmission pipeline that would parallel the existing 6-inch diameter transmission pipeline. The existing FMHS Well 01 and existing 6-inch diameter transmission pipeline would be used strictly for irrigation at the FMHS campus. A 120,000-gallon storage tank would be constructed at the FMHS tank site to provide for water storage.

Other activities included in the Project consist of all permitting and approvals required by the Kern Local Agency Formation Commission (LAFCo) to implement a Sphere of Influence Amendment and Annexation allowing the consolidation of the FMHS water system into LCWD's water system. The Project also includes other approvals and permitting associated with the construction and operation of the water system improvements as discussed in **Section 2.3.7**.

These proposed water system facilities intend to address water quality, water supply, water transmission, and water storage concerns. The Project would provide secure water supply to LCWD customers and the FMHS campus; limited residual growth, less than the Kern County's growth rate of 1%, is expected for the District and FMHS. These proposed facilities would provide for a strong water system backbone, thus addressing the primary water quality concerns while also increasing system reliability. If nothing is done, consumers would continue to be exposed to elevated levels of fluoride and uranium contamination, as well as the potential risk

of aging infrastructure adversely affecting the reliability and quality of water supplied. Without the proposed Project, the District's consumers may be impacted by a complete loss of water supply during an emergency.

The term "Area of Potential Affect (APE)" is used in the analyses to describe the Project's components or areas of disturbance and the parcels affected by the Project. Areas of disturbance as evaluated in this IS/MND are discussed in accordance with each Project component site and each includes a construction buffer. For pipeline alignments, the construction buffer extends a minimum of 12.5 feet in either direction of the pipelines. The total APE, when combined, would encompass approximately 11.8 acres including the buffers allowed for the construction equipment maneuvering. The APE for each of the Project components are listed below (refer to Attachment 1 for delineations of the APE).

1) LCWD Well No. 4 Site: Approximately 0.2 acres of disturbance.
2) Water pipeline from Well Site to Distribution System: Approximately 1.25 acres of disturbance.
3) Pressure zone interconnection pipeline on the western side of I-5: Approximately 1.0 acre of disturbance.
4) Pipeline Along Frazier Mountain Road between Lebec Road and Cuddy Canyon Road: Approximately 3.64 acres of disturbance.
5) Chimney Canyon Tank Site: Approximately 0.1 acres of disturbance.
6) FMHS Water System Improvements: Approximately 5.2 acres of disturbance.

Construction is estimated to be conducted over an approximate 18-month period. It is estimated that construction would begin in Fall 2021 and end in Spring 2023. The Project would require grading and excavating at the tank and well sites, as well as along the pipeline routes. Road closures would be necessary and would be coordinated with Kern County Roads Department. Construction equipment would include, but may not be limited to, the use of auger trucks, backhoes, excavators, compactors, scrapers, rollers, and lift trucks. Roadway re-paving may utilize earthmoving equipment, dozers, excavators and trucks, motor graders, cold planers, vibratory soil compactors, asphalt pavers, and compactors.

2.3.1 Lead Agency Name and Address

Lebec County Water District
323 Frazier Mountain Park Road
Lebec, CA 93243

Lead Agency Contact Person
Jessica Carrol, Office Manager/Clerk of the Board
(661) 248-6872

CEQA Consultant
Provost & Pritchard Consulting Group
Jeff O'Neal, AICP, Project Manager
Louise Palmer, AICP, Planner
(661) 616-5900

2.3.2 Project Location

The APE is located in southern Kern County, California, Township 9N, Range 19W, Section 33; Township 9N, Range 19W, Section 34; San Bernardino Base and Meridian (see **Figure 2-1** & **Figure 2-2**). Assessor's Parcel Numbers involved in activities included in this analysis are listed in **Table 2-1**:

Table 2-1. Project Assessor Parcels

Project Component	Assessor Parcel Numbers Involved
Pressure zone interconnection pipeline on western side of I-5	255-540-(47, 50); 255-700-24
Water pipeline from Well Site to Distribution System	255-540-50
Chimney Canyon Tank Site	255-470-43
LCWD Well No. 4 site	255-700 (04 & 39); 255-290-19
Pipeline Along Frazier Mountain Road	255-310-(16, 31, 55); 255-620-(48, 60, 59)
FMHS pipeline, booster pump station & water storage tank	255-560-(18, 33-36)

2.3.3 Latitude and Longitude

The APE is located at the following approximate latitudes and longitudes:

Table 2-2. Project Latitude/Longitude

Project Component	Latitude	Longitude
Pressure zone interconnection pipeline on western side of I-5	34° 49' 58.05" N	118° 51" 59.86" W
Water pipeline from Well Site to Distribution System	34° 49' 49.79" N	118° 53" 46.25" W
Chimney Canyon Tank Site	34° 49' 22.38" N	118° 52" 7.69" W
LCWD Well No. 4 site	34° 49' 39.09" N	118° 52" 10.06" W
Pipeline Along Frazier Mountain Road	34° 49' 9.49" N (east/beginning) 34° 49' 12.54" N (west/ending)	118° 52" 58.74" W (east/beginning) 118° 54" 10.24" W (west/ending)
FMHS pipeline, booster pump station & water storage tank	34° 49' 4.99" N (north/beginning) 34° 47' 48.70" N (south/ending)	118° 53" 46.48" W (north/beginning) 118° 53" 33.78" W (south/ending)

2.3.5 General Plan Designation

The Kern County General Plan designates the APE as follows (also refer to **Figure 2-4**):

Table 2-3. Project General Plan Designations

Project Component	General Plan Designation
Pressure zone interconnection pipeline on western side of I-5	State or Federal Land
Water pipeline from Well Site to Distribution System	State or Federal Land
Chimney Canyon Tank Site	Light Industrial
LCWD Well No. 4 site	Tejon Mountain Village Specific Plan
Pipeline Along Frazier Mountain Road	General Commercial, Service Industrial, Resource Management
FMHS pipeline, booster pump station & water storage tank	Frazier Park/Lebec Specific Plans

2.3.6 Zoning

The APE is zoned as follows (also refer to **Figure 2-5**):

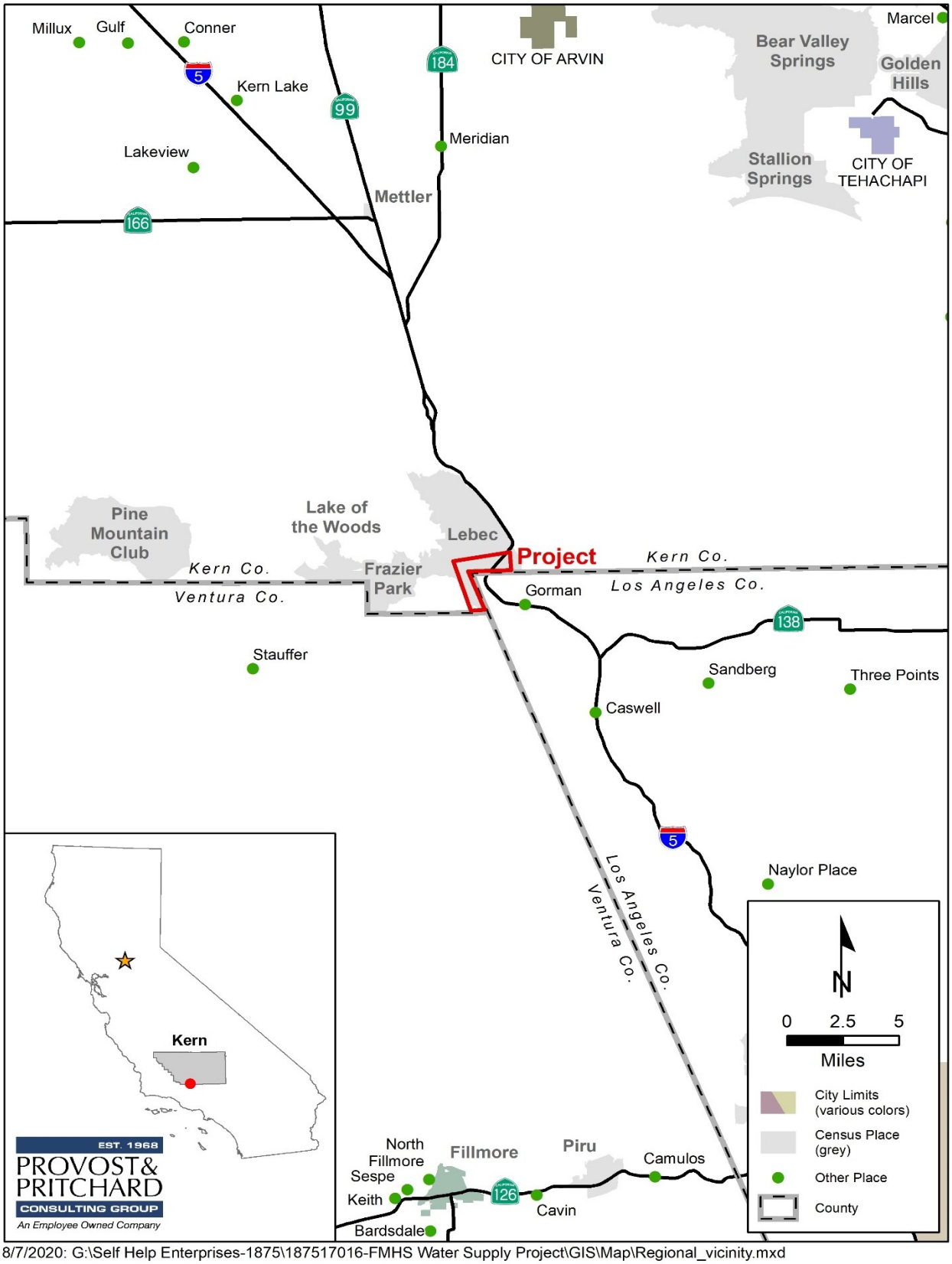
Table 2-4. Project Zoning

Project Component	Zoning		
	Kern County	Tejon Mountain Village Specific Plan	Frazier Park/Lebec Specific Plan
Pressure zone interconnection pipeline on western side of I-5	Limited Agriculture (A-!), General Commercial (C-2), Precise Development (PD), Geologic Hazard (GH), Flood Plain Secondary (FPS), Estate (E(20))	N/A	N/A
Water pipeline from Well Site to Distribution System	A-1 and FPS.	29 Dwelling Units/Net Acres Maximum (5.1), Highway Commercial (6.3), Other Facilities (3.3), and Parks and Recreation Areas (3.1).	N/A
Chimney Canyon Tank Site	E(2 ½), Residential Suburban (RS), Mobilehome (MH)	N/A	Urbanized Commercial and Low Density Residential
LCWD Well No. 4 site	Special Planning (SP), Recreation-Forestry (RF)	5.1, 6.3, 3.3, and 3.1.	N/A
Pipeline Along Frazier Mountain Road	Light Industrial (M-1), Medium Industrial (M-2), FPS, Highway Commercial (CH), Natural Resource (NR(20)), and PD.	N/A	Applicable but no zoning designation provided.
FMHS pipeline, booster pump station & water storage tank	Exclusive Agriculture (A)	N/A	Applicable but no zoning designation provided.

2.3.7 Other Public Agencies Whose Approval May Be Required

Table 2-5. Public Agencies Whose Approval May be Required

Agency	Agency Action
California Department of Fish and Wildlife	Section 7 Endangered Species Act implementation, Lake and Streambed Alteration Agreement
SWRCB	Water system permitting, issuance of Stormwater Pollution Prevention Permit (SWPPP)
CalTrans, District 6	Encroachment permit (highway)
San Joaquin Valley Air Pollution Control District	Dust control, equipment emissions permitting
Kern Local Agency Formation Commission	Sphere of influence amendment/annexation
Kern County Environmental Health Division	Well drilling permit, approval of water system
Kern County Roads	Encroachment permit (county roads)



8/7/2020: G:\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\Regional_vicinity.mxd

Figure 2-1. Regional Location

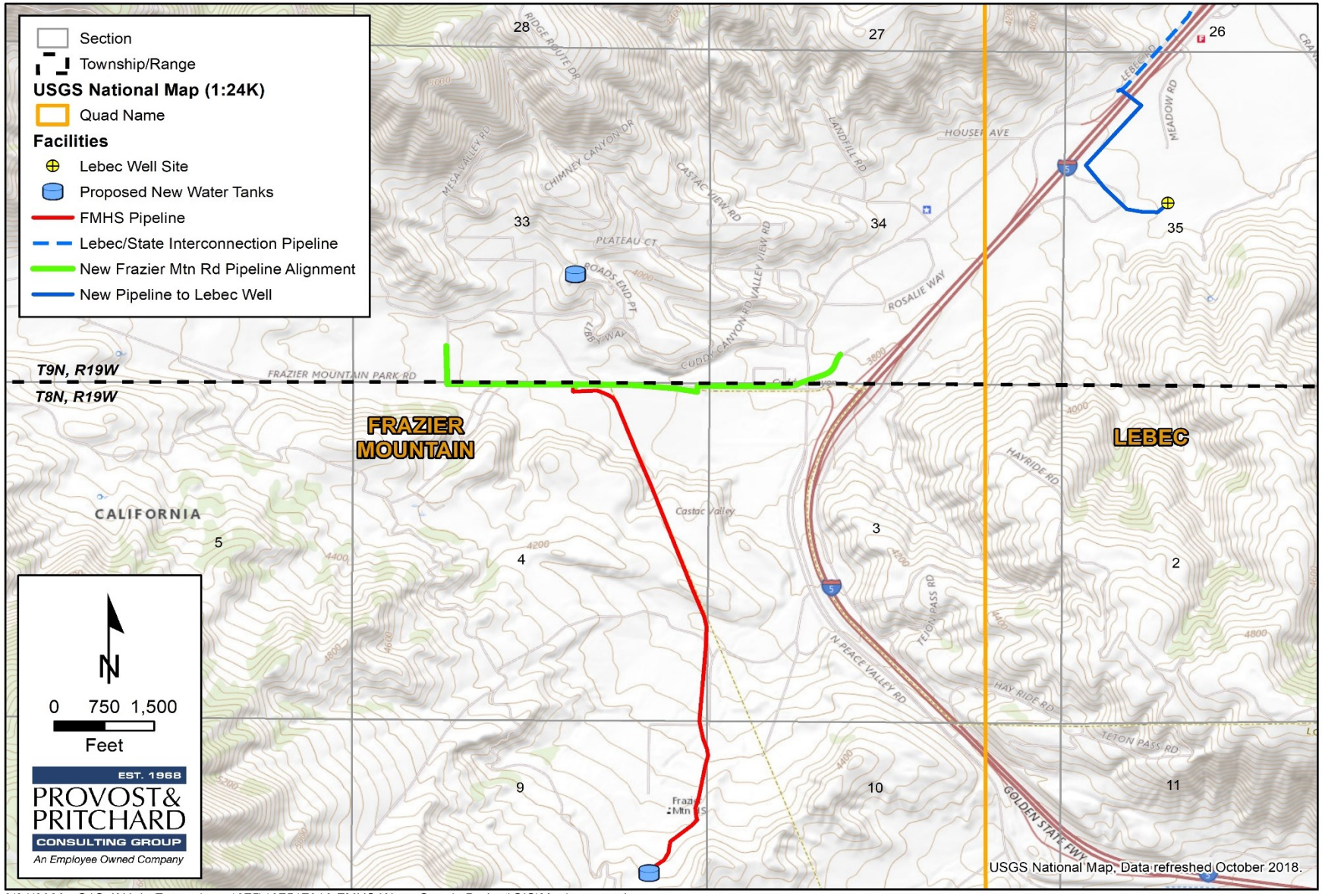


Figure 2-2. Topographic Quadrangle Map



Figure 2-3. Map of Project Components

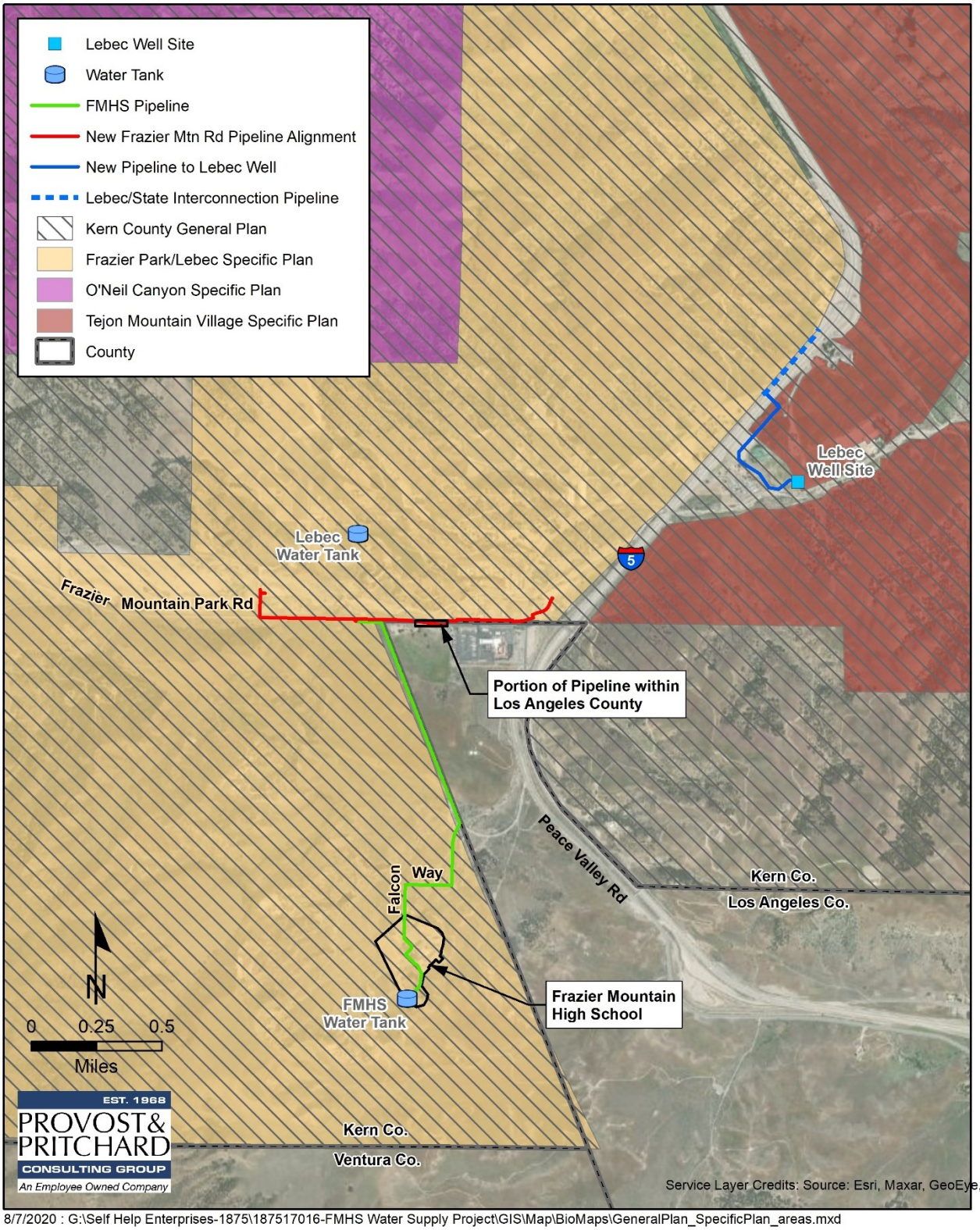
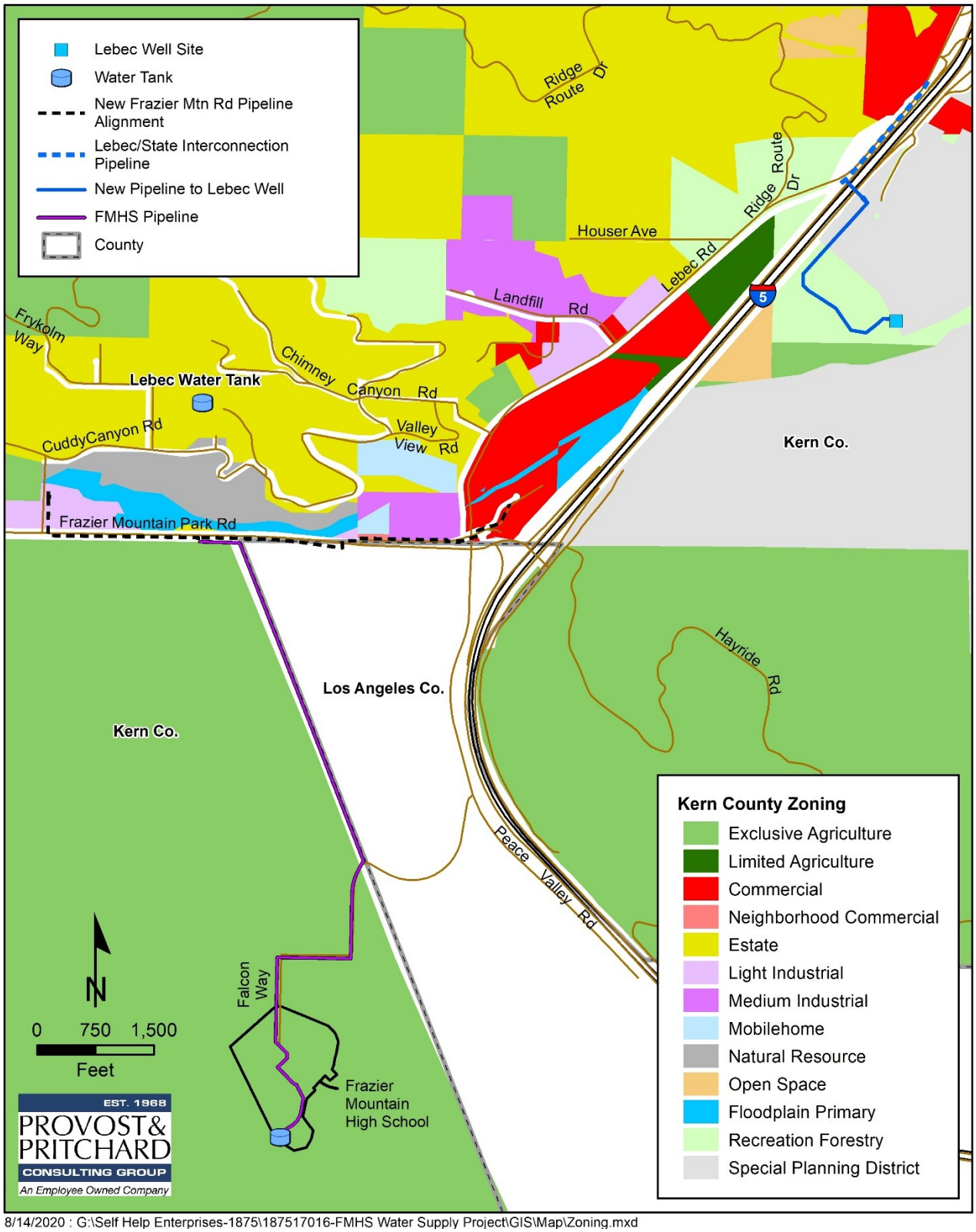


Figure 2-4. General Plan Land Use Designation Map



8/14/2020 : G:\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\Zoning.mxd

Figure 2-5. Zone District Map

Chapter 3 Impact Analysis

3.1 Environmental Factors Potentially Affected

As indicated by the discussions of existing and baseline conditions, and impact analyses that follow in this Chapter, environmental factors not checked below would have no impacts or less than significant impacts resulting from the project. Environmental factors that are checked below would have potentially significant impacts resulting from the project. Mitigation measures are recommended for each of the potentially significant impacts that would reduce the impact to less than significant.

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

The analyses of environmental impacts in **Chapter 3: Chapter 3** Impact Analysis are described by the following categories:

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Less than Significant with Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

Less than Significant Impact. This category is identified when the proposed Project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a project would not create an impact in the specific environmental issue area. "No Impact" answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

3.2 Aesthetics

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

3.2.1 Environmental Setting and Baseline Conditions

The Project is situated within an area that includes both gentle slopes and significant mountain ranges. The changes in topography within the APE experiences elevations ranging from approximately 3,800 feet above mean sea level (amsl) at the Lebec Well No. 4 site to approximately 4,400 feet amsl at the FMHS tank site, and 4,800 feet amsl at the Chimney Canyon Tank site. The visual horizon is largely undeveloped and remains in natural open space with views of the San Emigdio and Tehachapi Mountain Ranges. The Project's immediate area contains significant rural development.

For purposes of this analysis, and as defined in CEQA, "Urban area" includes either an incorporated city or an unincorporated area that is completely surrounded by one or more incorporated cities that meets both of the following criteria: (A) The population of the unincorporated area and the population of the surrounding incorporated cities equal a population of 100,000 or more. (B) The population density of the unincorporated area is equal to, or greater than, the population density of the surrounding cities. Pursuant to CEQA, neither the APE nor the Lebec community would be considered urban areas or urbanized environments.

3.2.2 Impact Assessment

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

Less than Significant Impact. The Project does not propose significant impediments to the view of the general public or obstructions to their view of the San Emigdio and Tehachapi Mountain Ranges. Many of the water system improvements would be developed below ground such as the underground pipeline infrastructure located along Lebec Road, Frazier Mountain Park Road, and the alignment through Castac Valley State Lands. The two above ground tanks and Well 04 would look similar to the existing tank located at FMHS and the existing LCWD Chimney tank farm, and at the existing Well 04 site. These sites would be visually consistent with existing conditions and would not substantially obstruct views. Accordingly, the Project would have a less than significant effect on scenic vistas in the area.

Mitigation Measures

No mitigation is warranted.

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

No Impact. A field survey was conducted of the site for purposes of identifying potential historic resources (refer to **Appendix C.**) The survey did not identify any structures that were listed or eligible for listing as a historic building. The mountainous area is of itself a scenic resource. The Project proposes to put the water pipeline underground and would not impede any surrounding scenic views. Additionally, trees, or rock outcroppings on or near the APE would not be disturbed and the pipeline alignments and Well 04 areas would return to pre-construction conditions. The proposed tanks would be installed in areas where water tanks already exist. There are no state scenic highways within the Project vicinity. The closest is Highway 33, partially designated and partially eligible, located over 35 miles west from the APE and Highway 126 is determined to be eligible to become a State scenic highway located over 40 miles away south, towards Santa Clarita. . There are no National Wild and Scenic Rivers within the Project vicinity. Piru Creek is the nearest wild and scenic river and is located south of Pyramid Lake approximately 28 miles from the Project APE. Therefore, the Project would have no impact on scenic resources or historic buildings within a state scenic highway or a national wild and scenic river.

Mitigation Measures

No mitigation is warranted.

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

Less than Significant Impact. The Project is located in a non-urbanized area. A project could have the potential to degrade the existing visual character of public views if it included structures having height, scale, and/or bulk that were incompatible with other development in the area, dominated the visual landscape, or resulted in a major obstruction to existing viewsheds from publicly accessible vantage points.. The Project proposes to construct or install visible structures as follows: 1) the new water tank in the Chimney tank site; 2) the new Lebec Well No. 4 located on the east side of I-5; 3) new booster pump stations at the FMHS Well site; and 4) the new water storage tank at the FMHS site. These proposed structures are similar to the structures already in existence. The high school tanks are located behind the school and above the existing baseball fields. The Chimney tank is proposed to be placed at an existing tank farm where 6 existing water tanks are already housed There are approximately 25 homes with a viewshed of the existing tanks with most of the homes located at a lower elevation. There are several homes located above the existing tank with clear views of the tank farm and would see the new larger Chimney tank. However, this tank would not block the viewshed from their homes. A clear line of sight to the open lands below would not be blocked. Project components and water system improvements would be located underground and therefore not visible.

The Project would not introduce development that is aesthetically incompatible with the area's existing visual character. Within the Chimney Tank site, the Project proposes an additional new water tank measuring approximately 42 feet in height and 42 feet in diameter. The new tank would be located in an existing, fenced, water tank enclosure. The water tank enclosure has six other existing water tanks that are each approximately 20 to 24 feet in height and 16 feet in diameter. These tanks are painted a sandy-beige and blend into the surrounding barren and glassy lands. The new tank would be painted a similar color as not to stand out amongst the other existing tanks or the surrounding landscape. The new Lebec Well No. 4 building would not exceed 12 feet in height and would be approximately 21 feet in length and 10 feet width; the size and scale would not be considered a substantial obstruction of public views of the surrounding San Emigdio mountains that reach

elevations of up to 8,017 feet amsl. The well site is between I-5, the northbound rest stop, and an existing parking/staging area for the Tejon Ranch. The new water storage tank at the FMHS site would be located at an elevation of approximately 4,400 feet amsl and would be similar in size to the existing 120,000-gallon water storage tank. Generally, the new irrigation tank would be behind the existing 120,000-gallon tank when viewed from the vantage point at the school buildings. Predominantly these tanks are only visible by the students and staff that attend the high school. Consistent with other Project construction, the new FMHS water storage tank would be painted blue, the same color as the existing tank and the official FMHS sport mascot colors. The new tank would blend aesthetically with the existing structures located on the FMHS campus. Therefore, the Project would not degrade the existing visual character or quality of public views of the site or its surroundings.

Mitigation Measures

No mitigation is warranted.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant Impact. Light and glare in this area comes from the unincorporated town of Lebec, traffic along highways and roads, existing street lighting, and from surrounding residential homes, ranchlands, and equipment. Proposed project activities would introduce new sources of light and glare during construction but would only be temporary in nature. .

During operation and maintenance activities of the water services would not significantly increase lighting sources and would be limited to provide light for safety and security purposes at the Chimney tank site and at the Lebec Well No. 4 site. Both of these sites are within developed areas that have existing sources of light. The Project would design any additional lighting to be hooded to reduce light nuisance on adjacent properties and would be less than the existing lighting in the area. As such substantial light or glare would be less-than-significant and would not adversely affect day or nighttime views in the area.

Mitigation Measures

No mitigation is warranted.

3.3 Agriculture and Forestry Resources

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

3.3.1 Environmental Setting and Baseline Conditions

The Project does not propose any land use changes that would directly or indirectly affect agriculture and/or agricultural uses. The United States Department of Conservation maintains a program for mapping and monitoring inventories of various categories of agricultural lands. The program, entitled the *Farmland Mapping and Monitoring Program*, land designations are shown in **Figure 3-1**

There are six designated land uses within the APE and are defined below:

1. *Grazing Land. Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.*

2. *Native Vegetation. Heavily wooded, rocky/barren areas, riparian and wetland areas, grassland areas which do not qualify as Grazing Land due to their size or land management restrictions, small water bodies and recreational water ski lakes. Constructed wetlands are also included in this category.*

3. *Rural Residential. A lower density residential area that has been developed or subdivided within an agricultural and/or open space and consists of residential areas of 1 to 5 structures per 10 acres of land.*

4. *Semi-Agricultural and Rural Commercial. Farmsteads, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, firewood lots, and campgrounds.*

5. *Urban and Built-up Land. Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.*

6. *Vacant or Disturbed Land. Open field areas that do not qualify as an agricultural category, mineral and oil extraction areas, off road vehicle areas, electrical substations, channelized canals, and rural freeway interchanges.*

3.3.2 Impact Assessment

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

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

No Impact. As shown on **Figure 3-1,** portions of the APE are designated mostly nonagricultural or natural vegetation with some smaller, scattered areas designed as rural residential, vacant or disturbed or urban and built-up lands. These designations are not in conflict with existing zoning practices and would not change any agricultural uses in the area. In addition, there are no Williamson Act agricultural land conservation contracts within the APE. The Project would not convert any agricultural lands to non-agricultural use or result in any conflicts with terms of existing Williamson Act contracts. As such, the Project would not conflict or change the existing zoning designations, nor would it alter any Williamson Act contracts, Prime, unique, or statewide farmlands and would have no impact.

Mitigation Measures

No mitigation is warranted.

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

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

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

No Impact. Los Padres National Forest is located west of I-5 and the town of Lebec and is outside of the APE. Proposed project activities include addition water facilities such as water storage tanks and associated pipeline to areas that have already been disturbed. The pipeline running from the north side of FMHS over the shrub and grassland hills to Frazier Mountain Park road would be trenched underground and would not need to remove any trees.as this area. As stated above Project activities would not need to change or alter existing zoning designations nor would they resulting the loss of forest land. Additionally, there would be no changes to the existing environment as a result of project activities. As such there would be no impacts to forest lands or their used.

Mitigation Measures

No mitigation is warranted.

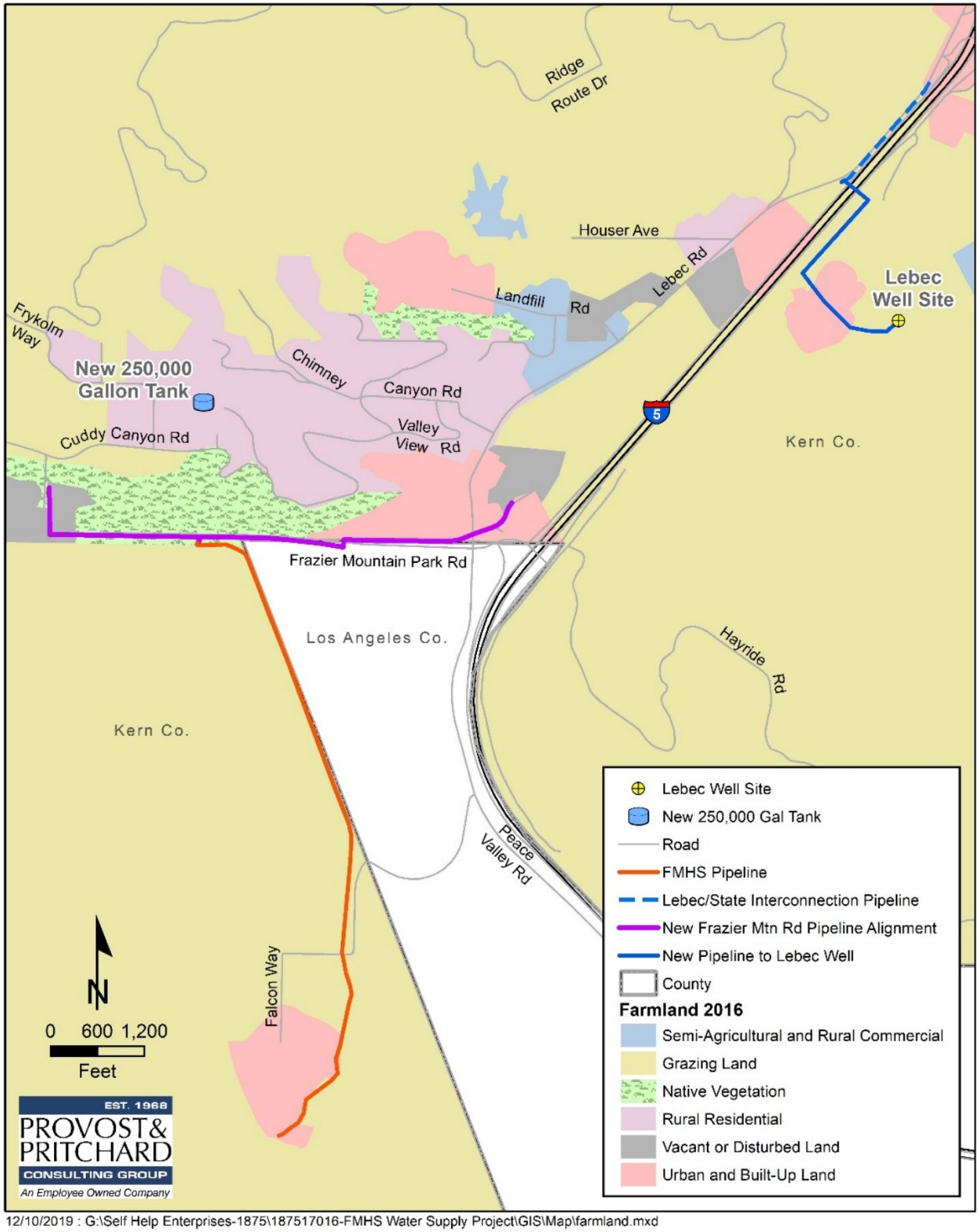


Figure 3-1. Farmland Designation Map

3.4 Air Quality

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

3.4.1 Environmental Setting and Baseline Conditions

The Project is located in the San Joaquin Valley Air Basin (SJVAB) which is the second largest air basin in the State. To assist local jurisdictions in the evaluation of air quality impacts, the SJVAPCD published the *Guide for Assessing and Mitigating Air Quality Impacts*. This guidance document includes recommended 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. Accordingly, the SJVAPCD-recommended thresholds of significance are used to determine whether implementation of the proposed Project would result in a significant air quality impact. Projects that exceed these recommended thresholds would be considered to have a potentially significant impact to human health and welfare. The thresholds of significance are included in **Table 3-2** and **Table 3-3** to provide for a comparative significance determination.

Assessment of the significance of a project's air quality impacts may be considered on a regional or localized level. Determination of project impacts on achieving the goal of air quality plans and evaluating impacts related to emissions of criteria pollutants are considered on both regional and localized levels in this analysis. Evaluation of impacts to sensitive receptors considers the project's localized criteria pollutant emissions in this analysis. Sources of the project's localized criteria pollutant emissions would include: reactive organic gases (ROG), Nitrogen oxides (NO_x), $PM_{2.5}$, PM_{10}, CO, NO_2, and Toxic Air Contaminants (TACs) which include acetaldehyde, benzene, 1.3 butadiene, carbon tetrachloride, hexavalent chromium, paradichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter which is a complex mixture of substances. The Project's estimated air emissions were calculated using CalEEMod, Version 2016.3.2 for the proposed Project in September 2019, for which criteria pollutants and greenhouse gas emissions results are provided as **Appendix A**. The sections below detail the methodology of the air quality impact assessment and conclusions. See **Section 3.9** for discussion of greenhouse gas emissions results.

3.4.1.1 Regulatory Attainment Designations

Under the California Clean Air Act (CCAA), the California Air Resources Board (CARB) is required to designate areas of the State as attainment, non-attainment, or unclassified with respect to applicable standards. 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 those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, 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. 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 United States Environmental Protection Agency (USEPA) designates areas for ozone, Carbon Monoxide (CO), and Nitrogen Dioxide (NO_2) as "does not meet the primary standards," "cannot be classified," or "better than national standards." For Sulfur Dioxide (SO_2), areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." 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 PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

The State and national ambient air quality standards and attainment status designations pertaining to the SJVAB are summarized in **Table 3-1**. The SJVAB is currently designated as a non-attainment area with respect to the State PM_{10} standard, ozone, and $PM_{2.5}$ standards. The SJVAB has historically been in non-attainment for the PM_{10} National Ambient Air Quality Standards (NAAQS), however, on September 25, 2008, the EPA re-designated the SJVAB to attainment status for the particulate matter 10 microns in size (PM_{10}). NAAQS and approved its PM_{10} Maintenance Plan. The SJVAB is currently designated non-attainment for the NAAQS 8-hour ozone and particulate matter 2.5 microns in size ($PM_{2.5}$) standards.

Table 3-1. Summary of Ambient Air Quality Standards and Attainment Designation

Summary of Ambient Air Quality Standards & Attainment Designation					
Pollutant	**Averaging Time**	**California Standards***		**National Standards***	
		Concentration*	**Attainment Status**	**Primary**	**Attainment Status**
Ozone (O_3)	1-hour	0.09 ppm	Nonattainment/ Severe	–	No Federal Standard
	8-hour	0.070 ppm	Nonattainment	0.075 ppm	Nonattainment/ Extreme**
Particulate Matter (PM_{10})	AAM	20 µg/m^3	Nonattainment	–	Attainment
	24-hour	50 µg/m^3		150 µg/m^3	
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m^3	Nonattainment	12 µg/m^3	Nonattainment
	24-hour	No Standard		35 µg/m^3	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment/ Unclassified	35 ppm	Attainment/ Unclassified
	8-hour	9 ppm		9 ppm	
	8-hour (Lake Tahoe)	6 ppm		–	
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm	Attainment	53 ppb	Attainment/ Unclassified
	1-hour	0.18 ppm		100 ppb	
Sulfur Dioxide (SO_2)	AAM	–	Attainment	--	Attainment/ Unclassified
	24-hour	0.04 ppm		--	
	3-hour	–		0.5 ppm	
	1-hour	0.25 ppm		75 ppb	
Lead (Pb)	30-day Average	1.5 µg/m^3	Attainment	–	No Designation/ Classification
	Calendar Quarter	–		--	
	Rolling 3-Month Average	–		0.15 µg/m^3	
Sulfates (SO_4)	24-hour	25 µg/m^3	Attainment	No Federal Standards	
Hydrogen Sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m^3)	Unclassified		
Vinyl Chloride (C_2H_3Cl)	24-hour	0.01 ppm (26 µg/m^3)	Attainment		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/km-visibility of 10 miles or more due to particles when the relative humidity is less than 70%.	Unclassified		

** For more information on standards visit: http//www.arb.ca.gov.research/aaqs/aaqs2.pdf*
*** No Federal 1-hour standard. Reclassified extreme nonattainment for the Federal 8-hour standard*
****Secondary Standard*
Source: CARB 2019; SJVAPCD 2019

The SJVAPCD is responsible for controlling emissions primarily from stationary and mobile sources. The SJVAPCD, in coordination with the eight countywide transportation agencies, is responsible for developing, updating, and implementing air quality attainment plans for the air basin SJVAB. The SJVAPCD has adopted ozone plans and particulate matter plans for purposes of controlling harmful emissions and achieving attainment of state and national attainment standards. A project that would exceed established thresholds for criteria pollutants would be considered to have a significant impact on the implementation of air quality plans and would also constitute a cumulatively considerable net increase of criteria pollutants for which the air basin SJVAB is in non-attainment.

The SJVAPCD considers construction and operational assumptions separately when making significance determinations.

3.4.1.2 Short-Term Construction-Generated Emissions

Project temporary construction activities would create pollutants that would be released to the localized area of the APE. The CalEEMod modeling includes emissions generated by short-term construction activities associated with the ground disturbance, equipment use, materials delivery emissions, and vehicle, equipment, and worker fuel usage. Emissions were quantified based on direct input of anticipated construction schedules and construction equipment usage from September 2021 to February 2023. All remaining assumptions were based on the default parameters contained in the model. Short-term construction related output results are presented in **Table 3-2.**

Table 3-2. Unmitigated Short-Term Project Level Construction Emissions

Unmitigated Short-Term Construction Emissions					
	Annual Emissions (Tons/Year)				
Construction Year	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
2021	0.27	2.68	2.10	0.41	0.27
2022	0.10	1.01	1.4	0.13	0.08
2023	0.01	0.13	0.18	0.00	0.00
Highest Construction Emissions Any Year	***0.27***	***2.68***	***2.10***	***0.41***	***0.27***
Total Project Construction Emissions (all years)	***0.38***	***3.82***	***3.68***	***0.54***	***0.35***
SJVAPCD Significance Thresholds:[2]	***10***	***10***	***100***	***15***	***15***
Exceed SJVAPCD Thresholds?	***No***	***No***	***No***	***No***	***No***

Table 3-2 identifies the short-term construction emissions for each year of the Project and cumulative emissions generated throughout the entire Project schedule. As compared to the SJVAPCD thresholds, the short-term emissions produced by the proposed Project for ROG, NOx, CO, PM10 and PM2.5 would not be exceeded and would not be a significant impact. Therefore, it was not necessary to include mitigation in the CalEEMod model for short-term construction impacts to meet the SJVAPCD thresholds.

Since the SJVAB is in nonattainment for ozone, $PM_{2.5}$, and PM_{10}, these pollutants have significant *cumulative* health impact to the area, even without the proposed Project. When this occurs, the analysis considers whether the project's contribution to the existing violation of air quality standards is "cumulatively considerable" or significant[3]. The SJVAPCD regional thresholds for NO_x, VOC, $PM_{2.5}$, and PM_{10} are applied as cumulative

[2] (San Joaquin Valley Air Pollution Control District, 2015), Air Quality Thresholds of Significance- Criteria Pollutants. Accessed August 11 2020.
[3] San Joaquin Valley Air Pollution Control District. 2015. Final Guidance for Assessing and Mitigating Air Quality Impacts. Accessed August 11 2020.

contribution thresholds within the CalEEMod model (**Appendix A**). Projects that exceed the regional thresholds would have a cumulatively considerable health impact.

3.4.1.3 Long-Term Operational Emissions

Operational emissions occur over the lifetime of a project are typically from two main sources: area sources and motor vehicles or mobile sources. Area source emissions include emissions from natural gas, landscaping activities, and off-gassing from construction materials and finishes. Project operations are expected to begin in the spring of 2023. Operational emissions for the Project would occur from stationary sources such as a portable 110 kW generator at the Lebec Well No. 4 site and a 40-kilowatt generator at the booster pump located at the FMHS well site. Both generators would be powered by self-contained fuel storage for a 24-hour period. The generator and booster pump would be used for emergencies only and are anticipated to operate no more than 100 hours per year.

Table 3-3. Unmitigated Long-Term Operational Emissions

Unmitigated Long-Term Operational Emissions					
	Annual Emissions (Tons/Year)				
Source	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Off-road Equipment	0.00	0.2	0.02	0.00	0.00
Stationary	0.08	0.04	0.20	0.00	0.00
Total Project Emissions	***0.08***	***0.24***	***0.22***	***0.00***	***0.00***
SJVAPCD Significance Thresholds	***10***	***10***	***100***	***15***	***15***
Exceed SJVAPCD Thresholds?	***No***	***No***	***No***	***No***	***No***

Table 3-3 identifies the long-term operational emissions for off-road and stationary equipment used to provide water to appropriate destinations. As compared to the SJVAPCD thresholds, the long-term emissions produced by the proposed Project for ROG, NOx, CO, PM10 and PM2.5 would not be exceeded and would not be a significant impact. Therefore, it was not necessary to include mitigation in the CalEEMod model for long-term operational impacts to meet the SJVAPCD thresholds.

3.4.2 Impact Assessment

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. The CEQA Guidelines indicate that a significant impact would occur if the Project would conflict with or obstruct implementation of any applicable air quality plans. The Guidelines for Assessing and Mitigating Air Quality Impacts (GAMAQI) discusses four SJVAPCD Air Quality Plans for 1-hour ozone, 8-hour ozone, PM10 and PM2.5. These plans evaluate control methods and use computer modeling to estimate future levels of pollution to ensure that the Valley will meet air quality goals. The GAMAQI states that using established criteria pollutant emissions thresholds when compared to the project emissions and the project emission are determined to be less than the thresholds of significance they would be determined to "not conflict or obstruct implementation of the Districts [SJVAPCD] air quality plans"[4]. Determination of whether the proposed Project emissions would violate any ambient air quality standard was performed through CalEEMod.

Regional air quality impacts and attainment of standards are the result of cumulative impacts of all emission sources within the SJVAB. Individual projects are generally not large enough to contribute measurably to an existing violation of air quality standards. Therefore, the cumulative impact of the Project is based on its

[4] (San Joaquin Valley Air Pollution Control District. 2015. Final Guidance for Assessing and Mitigating Air Quality Impacts, 2015). Accessed August 11, 2020.

cumulative contribution. Because the of the region's non-attainment status for ozone, $PM_{2.5}$, and $PM_{10,}$ if Project generated emissions of either of the ozone precursor pollutants ROG, No_x, PM_{10}, or $PM_{2.5}$ would exceed the SJVAPCD's significance thresholds, then the Project would be considered to contribute to violations of the applicable standards and conflict with the attainment plans. As demonstrated in **Table 3-2** emissions of ozone precursor pollutants during the Project's construction period would not exceed the SJVAPCD's significance thresholds, and would therefore not contribute to air quality violations in conflict with attainment plans. As shown in **Table 3-3** above, the regional analysis of construction emissions generated by the Project indicates that the Project would not exceed the District's significance thresholds during its operations. The comparison of Project impacts against SJVAPCD's thresholds indicates the Project is consistent with the applicable Air Quality Attainment Plan. Therefore, the Project would not result in a significant cumulative health impact.

The AQP contains a number of control measures, including Regulation VIII-*Fugitive PM_{10} Prohibitions* and Rule 9510 *Indirect Source Review* which are applicable to the Project and with which the Project must comply. The Project would comply with all applicable SJVAPCD rules and regulations; therefore, the Project complies with the criteria and would not conflict with or obstruct implementation of the applicable air quality attainment plans.

Mitigation Measures

No mitigation is warranted.

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

Less than Significant Impact. To result in a less than significant impact, the following criteria must be true:

1. Regional analysis: emission of non-attainment pollutants must be below the SJVAPCD's regional significance thresholds. This is an approach recommended by the SJVAPCD in its GAMAQI.
2. Summary of projections: the project must be consistent with current air quality attainment plans including control measures and regulations. This is an approach consistent with Section 15130(b) of the CEQA Guidelines.
3. Cumulative health impacts: the project must result in less than significant cumulative health effects from the non-attainment pollutants. This approach correlates the significance of the regional analysis with health effects, consistent with the court decision in Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184, 1219-20.

As discussed in **Section 3.4** (a), the Project-generated emissions are below the SJVAPCD's regional significance thresholds and the Project is consistent with current air quality attainment plans including control measures and regulations.

With respect to cumulative health impacts, the SJVAB is in non-attainment for ozone, $PM_{2.5}$, and PM_{10} (state only), which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, older adults, 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 in the population would experience adverse health effects. Since the SJVAB is already in non-attainment, it is considered to have an existing significant cumulative health impact without the Project. The issue is whether the Project's contribution to the existing violation of air quality standards is cumulatively considerable.

The SJVAPCD through its GAMAQI has determined that projects that exceed regional thresholds would have a cumulatively considerable health impact. As demonstrated in **Table 3-2** and **Table 3-3**, the Project would not exceed the SJVAPCD's significance thresholds during either construction or operation and would therefore have cumulatively considerable impacts that are less than significant.

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

Less than Significant Impact. Generally, sensitive receptors are those who are sensitive to air pollution, including children, older adults, and persons with pre-existing respiratory or cardiovascular illnesses. The SJVAPCD considers a sensitive receptor to be a location that houses or attracts children, older adults, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, long-term care facilities, and schools.

There are two sensitive receptors that may be exposed to pollution concentrations. The first location is the construction of a new water tank and associated water line above, around, and below the FMHS for drinking water, irrigation, and fire suppression. Construction would most likely occur outside of the designated school year and activities would be performed over the summer months, thereby not exposing students and staff to short-term construction pollutants. The second location is the new Chimney water tank located at the existing tank farm surrounded by scattered residential homes. Exposure to pollutants would be short-term and only during construction of the new tank. Operational pollutant exposures would remain minimal and only consist of maintenance vehicles driving to and from the tanks.

Project emission modeling results provided in **Appendix A** and summarized in **Table 3-2** and **Table 3-3**, quantifies the types of pollutants that have the potential to affect sensitive receptors. The primary pollutants of concern during the Project's highest construction year would generate: ROG (0.27 tons/yr), NO_x (2.68 tons/yr), PM_{10} (0.41 tons/yr), CO (2.1 tons/yr), and $PM_{2.5}$ (0.27 tons/yr). During its operation, the annual emissions of primary pollutants of concern are: ROG (0.08 tons/yr), NO_x (0.24 tons/yr), PM_{10} (negligible amounts), CO (0.22 tons/yr), and $PM_{2.5}$ (negligible amounts). Localized emissions from Project construction and operation were assessed to determine the Project's impacts on sensitive receptors.

When evaluated against regional thresholds as demonstrated in Table **3-2** and **Table 3-3**, the Project would result in a less than significant cumulatively considerable net increase of all criteria pollutants.

Mitigation Measures

No mitigation is warranted.

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

No Impact. Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, feed lots, asphalt batch plants, and rendering plants, among other uses. The Project does not include any of these activities or land uses and would not emit objectional odors. The Project would therefore have no impact with respect to generation of emissions leading to odors or other adverse or objectionable emissions.

Mitigation Measures

No mitigation is warranted.

3.5 Biological Resources

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

3.5.1 Environmental Setting and Baseline Conditions

The biological reconnaissance survey was conducted by Provost and Pritchard biologists over the course of several site visits one on November 14, 2019 and the other on August 3, 2020. The survey consisted of walking and driving through accessible Project areas while identifying and noting land uses, biological habitats and communities, and plant and animal species encountered. Furthermore, the site and surrounding areas were assessed for suitable habitats of various wildlife species. Access was granted by the necessary landowners prior to the field survey and an access permit was required and granted by Tejon Ranch on November 14, 2019 and August 3, 2020 for access on Tejon Ranch lands.

An analysis of potential Project-related impacts to biological resources was conducted based on the resources known to exist or with the potential to exist within the Project site and surrounding areas. Sources of information used in preparation of this analysis included: the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB); the United States Fish and Wildlife Service

(USFWS) Information for Planning and Consultation (IPaC) system; the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants of California; CalFlora's online database of California native plants; the Jepson Herbarium online database (Jepson eFlora); USFWS Environmental Conservation Online System (ECOS); the NatureServe Explorer online database; the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Plants Database; the CDFW California Wildlife Habitat Relationships (CWHR) database; the California Herps online database; and various manuals, reports, and references related to plants and animals of the San Joaquin Valley region. A thorough search of the CNDDB for published accounts of special status plant and animal species was conducted for the *Lebec* and *Frazier Mtn.* 7.5-minute quadrangles that contain the Project area in its entirety, and for the 10 surrounding quadrangles: *La Liebre Ranch, Liebre Mtn., Black Mtn., Alamo Mountain, Lockwood Valley, Cuddy Valley, Pleito Hills, Grapevine, Pastoria Creek,* and *Winters Ridge*. These species, and their potential to occur within the APE are listed in
Table 3-4 and **Table 3-5** on the following pages.

Table 3-4. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity

Species	Status	Habitat	Occurrence on Project Site
American badger *(Taxidea taxus)*	CSC	Grasslands, savannas, and mountain meadows near timberline are preferred. Most abundant in drier open spaces of shrub and grassland. Burrows in soil.	**Possible**. Although no American badger individuals or sign were observed during the field survey, suitable habitat in the form of sagebrush scrub and grassland was present in the Project area. The nearest observation of this species was recorded in 2003, approximately 7 miles southeast of the Project site.
arroyo toad (*Anaxyrus californicus*)	FE, CSC	Occurs in semi-arid regions near washes or intermittent streams, including valley-foothill, desert riparian, and desert wash. Prefers rivers with sandy banks, willows, cottonwoods, and sycamores. Found in loose, gravelly areas of streams in drier parts of range.	**Unlikely.** Marginal habitat is present in the form of washes and dry creek beds within sagebrush shrublands, but the Project is outside of the accepted geographic range and near the upper altitudinal limit of this species. The nearest recorded observation occurred approximately 7 miles south of the Project site (CNDDB, 2020).
bald eagle *(Haliaeetus leucocephalus)*	CE, CFP	Resides in old growth forests as well as lower montane coniferous forests. Nests are generally found in large, old-growth trees within a mile of water. Nests and winters along ocean shores, lake margins, and rivers.	**Possible**. Suitable nesting habitat is absent from the Project area; however, foraging habitat is present within Project areas near Tejon Ranch and the pipeline alignment from FMHS to Frazier Mountain Park Road. Bald eagles have been found to use the area surrounding Castac Lake as wintering habitat, with observations recorded in 2007 and 2008.
blunt-nosed leopard lizard (*Gambelia sila*)	FE, CE, CFP	Inhabits semi-arid grasslands, alkali flats, low foothills, canyon floors, large washes, and arroyos, usually on sandy, gravelly, or loamy substrate, sometimes on hardpan. Cannot survive on lands under cultivation. Resides in sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. Known to bask on kangaroo rat mounds and often seeks shelter at the base of shrubs, in small mammal burrows, or in rock piles. Adults may excavate shallow	**Absent**. The Project is located outside of the accepted geographical range of this species. The dense vegetative cover within the sagebrush scrub and grassland habitats and the disturbed nature of the ruderal habitats of the Project area are generally unsuitable for this species. Although this species is known to occur along the valley floor and within the foothills north of the Tehachapi Mountains, blunt-nosed leopard lizard does not typically inhabit lands with steep slopes, mountain ranges, or ridges above

Species	Status	Habitat	Occurrence on Project Site
		burrows but rely on deeper pre-existing rodent burrows for hibernation and reproduction.	elevations of 2,600 feet (Sandoval, Johnson, & Williams, 2019).
burrowing owl (*Athene cunicularia*)	CSC	Resides in open, dry annual or perennial grasslands, deserts, and shrublands with low growing vegetation. Nests underground in existing burrows created by burrowing mammals, most often ground squirrels.	**Possible.** The Project's elevation and terrain are unsuitable for breeding. However, this species could potentially winter within the grasslands or ruderal areas of the Project site. The sagebrush shrubland habitat that makes up most of the Project site is unsuitable for this species. Areas directly adjacent to the Lebec Well 04 site have been mapped as secondary suitable habitat according to a burrowing owl habitat suitability model (Dudek & USFWS, 2013).
California condor *(Gymnogyps californianus)*	FE, CE, CFP	Typically nests in cavities in canyon or cliff faces but has also been recorded nesting in giant sequoias in Tulare County. Requires vast expanse of open savannah, grassland, and/or foothill chaparral in mountain ranges of moderate altitude. Forages up to 100 miles from roost/nest site.	**Present.** Condors have been well documented nesting and roosting year-round in the Project's vicinity (Tejon Ranch, Tehachapi Mountains, Angeles National Forest, and Los Padres National Forest). The Project area contains suitable foraging habitat.
California glossy snake (*Arizona elegans occidentalis*)	CSC	Inhabits arid scrub, rocky washes, grasslands, and chaparral. Prefers open areas with loose soil for easy burrowing.	**Possible.** Suitable habitat is present within the Project areas in the form of sagebrush scrub, grassland, dirt roads, sandy creek beds, and desert washes. The nearest recorded observation of this species occurred in 1994, approximately 1.5 miles south of FMHS in the Hungry Valley State Vehicular Recreation area.
California horned lark (*Eremophila alpestris actia*)	CWL	Frequents open habitats, including short-grass prairie, mountain meadows, open coastal plains, fallow grain fields, and alkali flats. Found primarily in coastal regions, including Sonoma and San Diego Counties.	**Possible.** The grassland area of the Lebec Well 04 site could serve as suitable nesting habitat for this species. Suitable foraging habitat in the form of grasslands and shrublands are present within the Project site. The nearest recorded observation of this species was recorded in 2004 approximately 3.5 miles southeast of the Project site.
California legless lizard *(Anniella sp.)*	CSC	Inhabits a variety of habitats which contain moist, loose soils and plant cover. Often can be found under objects such as rocks, boards, driftwood, and logs.	**Possible**. Suitable habitat exists along dry creek beds and desert washes observed within the surveyed areas. There is a research grade observation of this species 2.5 miles west of the Frazier Mountain Road alignment from May of 2019 (iNaturalist.org web application, 2020).

Species	Status	Habitat	Occurrence on Project Site
California red-legged frog *(Rana draytonii*)	FT	Inhabits perennial rivers, creeks, and stock ponds with vegetative cover within the Coast Range and northern Sierra foothills.	**Absent**. Habitat required by this species is absent from the Project site.
coast horned lizard (*Phrynosoma blainvillii*)	CSC	Found in grasslands, coniferous forests, woodlands, and chaparral, primarily in open areas with patches of loose, sandy soil and low-lying vegetation in valleys, foothills, and semi-arid mountains. Frequently found near ant hills and along dirt roads in lowlands along sandy washes with scattered shrubs.	**Possible**. Numerous observations of this species have been recorded in the vicinity of Castac lake and the surrounding hillsides (CNDDB). This species was observed on several occasions (2003, 2005, and 2006) within big sagebrush/rabbitbrush scrub habitat during focused surveys of the Project area between FMHS and Frazier Mountain Park Road (Kern County Planning Department, 2009).
coastal California gnatcatcher (*Polioptila californica californica*)	FT, CSC	Obligate species of coastal sagebrush scrub habitats in southern California. Found at elevations below 2500 feet, typically along washes, mesas, and slopes.	**Unlikely.** The Project area is outside of the accepted geographic range and altitudinal range of this species (Unites States Fish and Wildlife Service, 2010)). The nearest recorded observation of this species was reported outside of its range, approximately 5.5 miles southeast of the Project site in in 2006 (CNDDB, 2020).
coastal whiptail AKA: San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*)	CSC	Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage.	**Possible**. Suitable habitat is present throughout Project areas. The nearest recorded observation of this subspecies was reported approximately 5.5 miles southeast of the Project in 2004 (CNDDB, 2020). The Project is located just north of the accepted geographic range of this subspecies.
conservancy fairy shrimp *(Branchinecta conservatio)*	FE	Found in large, cool-water vernal pools with moderately turbid water.	**Unlikely**. No vernal pools were observed within surveyed portions of the Project site or on historical aerial photography. Vernal pools have the potential to exist around Castac Lake after periods of flooding.
Cooper's hawk (*Accipiter cooperii)*	CWL	This species occurs in woodlands but is also commonly associated with urban habitats. Cooper's hawks commonly prey on smaller avian species and nest within conifers, oaks, and ornamental trees.	**Likely**. Suitable nesting and foraging habitat are present within the Project areas. This species is common in urban habitats. The nearest recorded observation of this species occurred approximately 4.5 miles southwest of the Project site in 2013 (CNDDB, 2020).
Crotch bumble bee (*Bombus crotchii*)	CCE	Occurs throughout coastal California, as well as east to the Sierra-Cascade crest, and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia,* and *Eriogonum*.	**Possible**. All nearby recorded observations of this species come from historical collections from over 40 years ago. There is potential for food plant genera to occur in the sagebrush and grassland habitats of the Project site.
ferruginous hawk (*Buteo regalis*)	CWL	Inhabits open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats.	**Possible.** Foraging habitat is present within Project areas. This species is a winter migrant and would not be

Species	Status	Habitat	Occurrence on Project Site
		Preys on lagomorphs, ground squirrels and mice.	expected to breed or nest in the vicinity. The nearest recorded observation of this species occurred approximately 7.5 miles east of the Project site in 2004 within native and non-native grassland habitat (CNDDB, 2020).
foothill yellow-legged frog (*Rana boylii)*	CCT, CSC	Frequents rocky streams and rivers with rocky substrate and open, sunny banks in forests, chaparral, and woodlands. Occasionally found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools.	**Absent**. Habitat required by this species is absent from the Project site. The nearest recorded observation of this species occurred approximately 7 miles southwest of the Project site in 2014.
golden eagle (*Aquila chrysaetod*)	CFP	This species typically nests on cliff ledges or large trees, rarely on the ground. They prefer an expanse of open terrain and are found over tundra, prairie, rangeland, desert, and grasslands.	**Likely.** Suitable foraging habitat is present within Project areas. Nesting habitat was not observed within the surveyed areas. This species is known to occur within Tejon Ranch and may inhabit the Project area year-round. There is one potential nesting observation recorded approximately 5.5 miles east of FMHS.
grasshopper sparrow (*Ammodramus savannarum*)	CSC	Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Species is loosely colonial when nesting. Inhabits dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes.	**Possible.** The Project is located within the historic and current breeding range of this species. Suitable nesting and foraging habitat are present within the surveyed areas. There is a recorded observation of this species approximately 4.5 miles southeast of Castac Lake.
Green sea turtle (*Chelonia mydas*)	FT	Found in shallow waters, except when migrating, inside reefs, bays, and inlets. Attracted to lagoons and shoals with an abundance of marine grass and algae. Open beaches with a sloping platform and minimal disturbance are required for nesting.	**Absent.** Habitat required by this species is absent from the Project site.
least Bell's vireo *(Vireo bellii pusillus)*	FE, CE	This migratory species breeds in southern California. Breeding habitat consists of dense, low, shrubby, riparian vegetation in the vicinity of water or dry river bottoms. By the early 1980s, this species was extirpated from most of its historic range in California, including the Central Valley. This species now occurs exclusively along the coast of southern California (United States Fish and Wildlife Service, 1998).	**Unlikely.** Suitable nesting habitat was not observed within the surveyed areas. Focused surveys for this species in 2007 and 2011 in the greater Tejon Ranch area resulted in no observations (Dudek & USFWS, 2013). Suitable breeding and foraging habitat for this nearly obligate riparian species has been modeled around Castac Lake. However, there are no recent recorded observations of this species. This species could potentially pass through the site during migration.
loggerhead shrike (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian areas, desert scrub, and agricultural hedgerows.	**Likely**. There have been two recent recorded observations of this species approximately 6 miles southeast of the Project area. Suitable nesting and foraging habitat are present within habitats of the Project area.

Species	Status	Habitat	Occurrence on Project Site
Mount Pinos sooty grouse (*Dendragapus fuliginosus howardi*)	CSC	Inhabitant of southern Sierra Nevada mountains, south of Kings Canyon, and now extirpated from the historic southern portion of its range in Piute and Tehachapi mountains (Shuford & Gardali, 2008). Associated with high elevation montane coniferous forests, typically *Abies*-dominated associations.	**Absent.** Although the Project is located within its historic range, this species has been extirpated from the Piute and Tehachapi Mountains. Suitable montane coniferous habitat was not observed within the surveyed areas.
Nelson's antelope squirrel *(Ammospermophilus nelsoni)*	CT	Found in the western San Joaquin Valley on dry, sparsely vegetated loamy soils. Relies heavily on existing small mammal burrows.	**Unlikely**. Suitable habitat for this species was not observed within the surveyed areas. The Project area is outside of the accepted distribution range of this species. The only nearby recorded observations of this species correspond to historic collections.
northern California legless lizard (*Anniella pulchra*)	CSC	Found primarily underground, burrowing in loose, sandy soil. Forages in loose soil and leaf litter during the day. Occasionally observed on the surface at dusk and night.	**Possible**. Suitable habitat exists along dry creek beds and desert washes observed within surveyed areas. There is a research grade observation of this species 2.5 miles west of the Frazier Mountain Road alignment from May of 2019 (iNaturalist.org web application, 2020).
pallid bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwell 04ing arthropods, and occasionally takes insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and other man-made structures.	**Unlikely.** The Project site is outside the current modeled distribution range of this species. Foraging habitat exists throughout the Project site for this species. Suboptimal roosting habitat in the form oak trees are present within the Project site.
prairie falcon (*Falco mexicanus*)	CWL	Inhabits dry, open terrain, either level or hilly, in a variety of scrublands and grasslands. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	**Present**. Species observed onsite during the biological survey.
purple martin (*Progne subis*)	CSC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities as well as in human-made structures. Nest often located in tall, isolated trees and snags.	**Possible.** This species is known to occur within Tejon Ranch and the Tehachapi Mountains. Nesting habitat in the form of oak trees was observed within the surveyed Project areas.
Riverside fairy shrimp (*Streptocephalus woottoni*)	FE	Found only in vernal pools, ponds, and other ephemeral pool-like bodies of water. During dry periods, cysts of the species lay dormant in the soil and hatch when adequate rainfall fills the ponds and pools.	**Unlikely**. No vernal pools were observed within the surveyed portions of the Project site. The area surrounding Castac Lake could potentially serve as marginal habitat for this species in wet years.
San Joaquin coachwhip *(Masticophis flagellum ruddocki)*	CSC	Found in open dry habitats with little or no tree cover in valley grassland and saltbush scrub communities in the San Joaquin Valley. Relies on mammal	**Possible**. Suitable habitat exists along dry creek beds and desert washes observed within surveyed areas. The nearest recorded observation of this

Species	Status	Habitat	Occurrence on Project Site
		burrows for refuge and oviposition sites.	species occurred approximately 11 miles northwest of the Project site in 2010.
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, CT	Underground dens with multiple entrances in alkali sink, valley grassland, and woodland in valleys and adjacent foothills.	**Unlikely.** The rugged terrain and dense vegetative cover found throughout most of the Project area is generally unsuitable for this species. The Project area is just outside of the accepted distribution range and above the elevation at which this species typically occurs. Although a satellite population of kit foxes is known to inhabit a portion of Tejon Ranch located 10 miles north of the Project, focused surveys in 2009 indicated an absence of kit foxes on the southern portion of Tejon Ranch (Cypher, Van Horn Job, Tennant, & Phillips, 2010).
southern rubber boa (*Charina umbratical*)	CT	Inhabits oak-conifer and mixed-conifer forests at elevations between 5,000 to 8,200 feet where rocks, logs, and other debris provide shelter. The range of this species is unclear, but it is known to occur in montane southern California in the San Bernardino and San Jacinto Mountains. There is some question as to whether the *Charina* species found in the southern Sierra Nevada, Tehachapi Mountains, and Mt. Pinos is in fact *C. umbratical*.	**Absent.** The Project area is below the altitudinal range of this species. This species is known to occur in the Los Padres National Forest at higher elevations, west of the Project area. Suitable montane conifer forest habitats were not observed within the surveyed areas.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE, CE	Found primarily in extensive willow thickets. Breeding populations are found only in isolated meadows of the Sierra Nevada, and along the Kern, Santa Margarita, San Luis Rey, and Santa Ynez Rivers in southern California. Between August and September, this species migrates to wintering grounds in Mexico, Central America, and possibly northern South America.	**Unlikely**. Suitable breeding and foraging habitat were not observed within the surveyed areas. Focused surveys for this species in 2007 and 2011 in the greater Tejon Ranch area resulted in no observations. Suitable breeding and foraging habitat for this species has been modeled around Castac lake (Dudek & USFWS, 2013).
Tehachapi pocket mouse (*Perognathus alticola inexpectatus*)	CSC	Inhabits arid annual grassland and desert shrub communities, but also found in fallow grain fields and in Russian thistle. Burrows for cover and nesting and will hibernate during extreme weather. Forages on open ground and under shrubs.	**Possible.** Suitable habitat was observed within surveyed areas. There are several recorded occurrences of this species in the vicinity of the Project.
Tehachapi slender salamander (*Batrachoseps stebbinsi*)	CT	Found in valley-foothill hardwood-conifer & valley-foothill riparian in the Piute and Tehachapi mountains of Kern County. Prefers wet talus slopes or log-strewn hillsides with a steep, north-facing exposure.	**Possible.** This species is known to occur within Tejon Ranch. Habitats observed within the surveyed areas were marginal, but suitable riparian oak-dominated habitats were present within 1 mile of the Project site.

Species	Status	Habitat	Occurrence on Project Site
Tipton kangaroo rat *(Dipodomys nitratoides nitratoides)*	FE, CE	Burrows in soil. Often found in grassland and shrubland from the valley floor to approximately 300 feet in elevation.	**Absent**. The Project area is outside of the elevational range of this species.
Townsend's big-eared bat *(Corynorhinus townsendii)*	CSC	Occurs in a variety of habitats, but prefers cool, dark roost sites, and are often found in caves and mines. They roost in the open, hanging from walls and ceilings. Western populations typically forage on moths in areas of dense foliage.	**Possible**. Suitable foraging habitat for this species exists within the project site. Suboptimal roosting habitat exists in the form of the oak trees within the Project site. The nearest recorded observations of this species occurred over 70 years ago.
tricolored blackbird *(Agelaius tricolor)*	CT, CSC	Nests colonially near fresh water in dense cattails or tules, or in thickets of riparian shrubs. Forages in grassland and cropland. Large colonies are often found on dairy farm forage fields.	**Likely**. Within the surveyed areas, nesting habitat would be considered marginal, at best. Foraging habitat in the form of grassland was present. 15 adult tricolored blackbirds were observed nesting around Castac Lake during a 2007 field survey (Dudek & USFWS, 2013). This species was also observed in the marshy area near lake in 1999, 2000, 2001, 2003, and 2004. Nesting was observed near the lake in 2005, as well. Suitable foraging habitat for this species has been modeled directly adjacent to the Project site on the east side of I-5.
two-striped gartersnake *(Thamnophis hammondii)*	CSC	Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	**Absent**. The Project area lacks permanent freshwater bodies, and therefore is unsuitable for this species. The nearest recorded observation of this species was recorded in 1983 approximately 1.5 miles southeast of the Project site.
vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	Occupies vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	**Unlikely.** No vernal pools were observed within the surveyed portions of the Project site. The area surrounding Castac Lake could potentially serve as marginal habitat for this species in wet years. The only nearby recorded observation of this species was made in 1989 approximately 13 miles southwest of the Project site.
western pond turtle (*Emys marmorata*)	CSC	An aquatic turtle of ponds, marshes, slow-moving rivers, streams, and irrigation ditches with riparian vegetation. Requires adequate basking sites and sandy banks or grassy open fields to deposit eggs.	**Possible.** This species has been recently observed near Quail pond, approximately 5 miles east of FMHS. Although suitable aquatic habitat was not observed within the surveyed areas, this species could potentially occur within intermittent drainages, ditches, and even artificial waterbodies, such as ponding basins or water treatment facilities near the Project. Upland habitat in the form of riparian woodland is present in the vicinity, and this highly mobile could potentially pass through Project areas during dispersal or mating movements.

Species	Status	Habitat	Occurrence on Project Site
western spadefoot (*Spea hammondii*)	CSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools or temporary wetlands, lasting a minimum of three weeks, which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	**Unlikely**. The Project is outside of accepted distribution range of this species. No vernal pools were observed within the surveyed portions of the Project site. Focused surveys for this species conducted in 2007 within the TUMSHCP area, although suitable habitat has been modeled for this species around Castac Lake and along Cuddy Creek, directly adjacent to the Lebec Well 04 Site and associated pipeline alignment (Dudek & USFWS, 2013). Herpetological surveys conducted in 2011 found western spadefoot to be present within the northern portion of Tejon Ranch (Live Oak Associates, 2011), and there is a CNDDB record from 2013 of this species at the base of the foothills approximately 7 miles north of Castac Lake.
yellow warbler (*Setophaga petechia*)	CSC	Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders. Also nests in montane shrubbery in open conifer forests in the Cascades and Sierra Nevada ranges.	**Possible.** There are two nesting occurrences recorded approximately 3 miles south of Castac Lake. Suitable nesting habitat was not observed within surveyed areas, but this species could pass through the Project site.
yellow-blotched salamander (*Ensatina eschscholtzii croceater*)	CWL	Found in evergreen and deciduous forests, under rocks, logs, and other debris. Shaded north-facing areas seem to be favored, especially near creeks or streams.	**Possible.** This species is known to occur within Tejon Ranch. Habitats observed within the surveyed areas were marginal, but suitable riparian oak-dominated habitats were observed within 1 mile of the Project site.

Table 3-5. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity.

Species	Status	Habitat	Occurrence on Project Site
Abrams' oxytheca (*Acanthoscyphus parishii var. abramsii*)	CNPS 1B	This chaparral species is found in shale and sandy substrate in the Transverse Mountain range. Grows at elevations between 5577 feet and 6562 feet. Blooms June – August.	**Absent**. This species occurs at higher elevations, approximately 10 miles west of the Project area in Los Padres National Forest. Chaparral habitat was absent from the surveyed Project areas, and the Project is below the accepted altitudinal range of this species.
Baja navarretia (*Navarretia peninsularis*)	CNPS 1B	Found in woodlands, chaparral, meadows, and seeps throughout southern California. This species is equally likely to occur in wetlands and non-wetlands, at elevations between 4593 feet and 7546 feet. Blooms June – August.	**Unlikely**. The Project area is below or near the accepted lower altitudinal range of this species. Suitable habitat for this species was not observed within the surveyed areas. This species is known to occur within Frazier Mountain and Lockwood Valley in Los Padres National Forest, approximately 6 miles west of FMHS and within oak woodland in Oso Canyon, approximately 5 miles southeast of Castac Lake (CNDDB, 2020).
Bakersfield cactus (*Opuntia basilaris var. treleasei*)	CNPS 1B, FE, CE	Found in chenopod shrublands, valley and foothill grasslands, cismontane woodlands where the Transverse range, Coastal range, Sierra Nevada range, and Mojave Desert meet. This species grows in coarse or cobbly well-drained granitic sand at elevations between 275 feet and 1800 feet. Blooms March – April.	**Absent**. The Project area is outside of the accepted native range and altitudinal range of this species.
Big Bear Valley woollypod (*Astragalus leucolobus*)	CNPS 1B	Found in the Mojave Desert and Transverse Mountain range in woodland, forest, and plains habitats. Often associated with pine woods and sagebrush and grows at elevations between 3600 feet and 9500 feet. Blooms May – July.	**Possible**. Suitable gravelly soils and sagebrush habitats were present within the Project area. Historically, this species was understood to occur within the San Gabriel Mountains and the San Bernardino Mountains, more than 70 miles southeast of the Project; however, there is a current (2013) observation of a population adjacent to I-5 approximately 3 miles south of Castac Lake (CNDDB, 2020). Comments accompanying this observation state that this could potentially represent a misidentification and should be verified.
calico monkeyflower *(Diplacus pictus / Mimulus pictus / Eunanus pictus)*	CNPS 1B	Found in the Sierra Nevada foothills and the Tehachapi mountains in bare, sunny, shrubby areas, and around granite outcrops within foothill woodland communities at elevations between 450 feet and 4100 feet. Blooms March – May.	**Possible**. There are several recorded observations of this species within Tejon Ranch, the nearest located approximately 5 miles northeast of the Lebec Well 04 site. Although granite outcrops were not observed within surveyed areas, marginal habitat was present in the form of shrubland with gravelly soils, dry desert washes, and rocky ephemeral creek beds.

Species	Status	Habitat	Occurrence on Project Site
California Orcutt grass (*Orcuttia californica*)	FE	Found throughout coastal southern California in the Transverse Ranges, San Gabriel mountains, Peninsular Ranges, and the San Jacinto Mountains. Grows in vernal pool habitats at elevations below 2295 feet. Blooms April – August.	**Absent**. The Project is located above the accepted altitudinal range of this species. Suitable vernal pool habitat was not observed within the surveyed areas.
Davidson's bush-mallow (*Malacothamnus davidsonii*)	CNPS 1B	Found in the coast ranges, Transverse range, and Peninsular range in primarily dry chaparral, woodland, and scrub habitats, but occasionally in wetlands. Grows in sandy soils at elevations between 500 and 5000 feet. Blooms May – July.	**Possible**. There are historic (1962 and prior) records of this species within Los Padres National Forest, approximately 17 miles southwest and 20 miles west of FMHS. Suitable habitat in the form of sagebrush scrub and sandy washes were observed within the surveyed areas.
delicate bluecup (*Githopsis tenella*)	CNPS 1B	Found in foothill areas surrounding the San Joaquin Valley, growing in mesic sites. Habitats include chaparral and cismontane woodlands at elevations between 3610 feet and 6233 feet. Blooms May – June.	**Unlikely**. Suitable habitat was not observed within the surveyed areas. The only recorded observation of this species in the vicinity of the Project occurred over 50 years ago approximately 13 miles northeast of the Project site.
Fort Tejon woolly sunflower (*Eriophyllum lanatum var. hallii*)	CNPS 1B	Occurs in the Coastal and Transverse ranges in woodland and chaparral habitats. Grows in loamy soils on slopes at elevations between 3937 and 4921 feet. Blooms June – July.	**Likely**. A focused survey of this species near the east side of the Project area in 2007 resulted in 36 occurrences of this species, primarily located at elevations between 3,600 and 5,000 feet (Dudek & USFWS, 2013). This species has also been observed near Fort Tejon State Historic Park.
Greata's aster (*Symphyotrichum greatae*)	CNPS 1B	Occurs in a variety of woodland, forested and chaparral habitats in south western California. Often found in mesic canyons and grows at elevations between 985 and 6,560 feet. Blooms August – October.	**Unlikely**. Suitable habitat was not observed within the surveyed areas. The only recorded observation of this species in the vicinity of the project site occurred approximately 19 miles southeast and 1,000 feet in elevation below of the Project site.
grey-leaved violet (*Viola pinetorum ssp. grisea*)	CNPS 1B	Found in the Sierra Nevada range as well as areas of interior southern California. Grows in subalpine forested areas, meadows, and seeps at elevations between 5,200 and 12,140 feet. Blooms June – July.	**Absent**. Suitable habitat was not observed within surveyed areas, and the Project is below the accepted lower altitudinal range of this species.

Species	Status	Habitat	Occurrence on Project Site
Horn's milk-vetch *(Astralagus hornii var. hornii)*	CNPS 1B	This facultative species is most frequently found in the San Joaquin Valley and Sierra Nevada foothills in the alkali soils of lake margins, meadows, seeps, and playas at elevations between 196 feet and 1,150 feet. Blooms May – September.	**Unlikely**. Although there is a historic (1863) observation of this species within Fort Tejon, the Project area is above the accepted upper altitudinal range of this species
Kern mallow *(Eremalche parryi ssp. kernensis)*	CNPS 1B, FE	Occurs in the San Joaquin Valley and the Inner South Coast Ranges in eroded hillsides and alkali flats in shadescale scrub and valley grassland communities at elevations between 325 feet and 3275 feet. Blooms March – May.	**Absent**. The Project is located outside of the accepted native range of this species.
Lemmon's jewelflower (*Caulanthus lemmonii*)	CNPS 1B	Grows in the Coastal range and Mojave woodlands and grasslands at elevations between 260 and 3,610 feet. Often associated with pinyon pines and junipers. Blooms March – May.	**Possible**. Suitable habitat in the form of grassland was observed within surveyed areas. There is a recent (2015) observation of this species within Los Padres National Forest, along Frazier Mountain Park Road, approximately 3 miles west of the Project.
Lost Hills crownscale *(Atriplex coronata var. vallicola)*	CNPS 1B	Found in the San Joaquin Valley in chenopod scrub, valley and foothill grassland, and vernal pools at elevations below 1400 feet. Typically found in dried ponds on alkaline soils. Blooms April – September.	**Absent**. The Project area is below the lower altitudinal range of this species.
Madera leptosiphon (*Leptosiphon serrulatus*)	CNPS 1B	Found in openings in foothill woodland, often yellow-pine forest, and chaparral at elevations between 1000 feet and 4300 feet. Blooms April – May.	**Absent.** Suitable habitat was not observed within the surveyed areas. The only nearby recorded observation of this species is part of a historical collection, mapped approximately 11 miles northeast of the Project site.
Mt. Gleason paintbrush (*Castilleja gleasoni*)	CR, CNPS 1B	Occurs exclusively in the lower montane areas of the San Gabriel Mountains in chaparral and woodland habitats. Grows in granitic soils on open flats as well as slopes at elevations between 3610 feet and 7218 feet. Blooms May – June.	**Absent.** Suitable habitat was not observed within the surveyed areas. The Project is located outside of the accepted native range of this species.
Mt. Pinos onion (*Allium howellii var. clokeyi*)	CNPS 1B	Generally found in the Transverse and Coastal ranges growing at elevations between 4264 and 6070 feet. Associated with a variety of habitats including Great Basin scrub, pinyon and juniper	**Possible.** This species is known to occur within Frazier Mountain in the Los Padres National Forest. There are several recorded observations along Frazier Mountain Park Road and Lockwood Valley Road, the nearest of which is located approximately 2 miles west of the Project area along Frazier Mountain Park Road. Suitable sagebrush

Species	Status	Habitat	Occurrence on Project Site
		woodlands, and meadows and seeps. Blooms May – June.	scrub habitat was observed within the surveyed areas.
pale-yellow layia *(Layia heterotricha)*	CNPS 1B	Found in the coastal ranges, Transverse range, and occasionally on the San Joaquin valley floor in a variety of habitats including juniper woodlands, coastal shrublands, and foothill grasslands. Grows at elevations between 656 – 5905 feet. Blooms April – June.	**Possible**. Suitable grassland and sagebrush scrub habitat were observed within Project areas. There are several recorded observations along Frazier Mountain Park Road and Lockwood Valley Road, the nearest of which is located approximately 5.5 miles west of the Project area along Frazier Mountain Park Road. This species is also known to occur within the Tehachapi Mountains, with multiple observations in a region approximately 30 miles northeast of Castac Lake.
Palmer's mariposa-lily (*Calochortus palmeri var. palmeri*)	CNPS 1B	Found throughout southwestern California, primarily in wetland habitats, but occasionally in non-wetland habitats, including woodlands and shrublands. Grows at elevations between 3937 and 7218 feet. Blooms May – July.	**Possible.** Multiple observations of this species have been made in the vicinity of the Project. This species is known to occur on Frazier Mountain in Los Padres National Forest and within Tejon Ranch. Several of the recorded observations are current (within the last 25 years), and there is one historic (1964) observation reported at a location described as "0.5 mile south of Lebec" (CNDDB, 2020). Suitable habitat for this species is present within the Project area.
Piute Mountains navarretia (*Navarretia setiloba*)	CNPS 1B	Occurs in the Sierra Nevada foothills, San Joaquin Valley, and the Western Transverse Ranges in woodlands and grasslands at elevations between 590 and 6890 feet. Grows in red clay soils or gravelly loam. Blooms April – July.	**Possible.** This species is known to occur within Tejon Ranch. Marginally suitable habitat and gravelly loamy soils were observed within the surveyed areas.
Robbins' nemacladus (*Nemacladus secundiflorus var. robbinsii*)	CNPS 1B	Occurs on dry, sandy, or gravelly slopes in opening in woodland and grassland habitats at elevations between 1180 – 5610 feet. Blooms April – May.	**Possible.** Suitable habitat was observed on the slopes surrounding FMHS. There are historic records of this species within Hungry Valley SVRA and Los Padres National Forest in the vicinity of the Project.
salt spring checkerbloom (*Sidalcea neomexicana*)	CNPS 2B	Occurs in alkali springs and marshes in chaparral, coastal scrub, lower montane coniferous forest, and Mojavean desert scrub at elevations between 50 – 7,800 feet. Blooms March – June.	**Possible.** Suitable habitat was not observed within surveyed areas. However, this species has been recorded within Los Padres National Forest west of the Project and suitable habitat could potentially be present within the area.

Species	Status	Habitat	Occurrence on Project Site
San Bernardino aster (*Symphyotrichum defoliatum*)	CNPS 1B	Occurs in meadows, seeps, marshes, and vernally mesic grasslands near ditches; often in disturbed areas at elevations below 6725 feet. Blooms July – November.	**Possible.** Suitable habitat was observed within the surveyed areas. There are recorded observations of this species on Frazier Mountain in los Padres National Forest, west of the Project.
short-joint beavertail (*Opuntia basilaris var. brachyclada*)	CNPS 1B	This perennial stem succulent occurs in sandy soil or course granitic loam in chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon-juniper woodland habitats at elevations between 1400 – 6600 feet. Blooms April – June.	**Possible.** Marginal habitat was observed in the surveyed areas around FMHS. This species is known to occur in Hungry Valley SVRA, approximately 5 miles southeast of FMHS.
slender mariposa-lily (*Calochortus clavatus var. gracilis*)	CNPS 1B	This species occurs in shaded foothill canyons in chaparral, coastal scrub, and grassland habitats at elevations below 6,000 feet. Blooms May – June.	**Possible.** Typical **s**uitable habitat was not observed within surveyed areas. However, this species has been well documented in a region approximately 10 miles southeast of FMHS and suitable habitat could potentially be present within the Project area.
spreading navarretia (*Navarretia fossalis*)	FT	This obligate species occurs in the Mojave, the Central Coast, and throughout coastal southern California. Found in habitats withstanding water, including vernal pools, growing at elevations between 985 and 4265 feet. Blooms April – June.	**Absent**. The Project is located outside of the accepted native range of this species, and suitable habitat was not observed within the surveyed areas.
Tehachapi buckwheat (*Eriogonum callistum*)	CNPS 1B	This species occurs on rocky limestone substrate in opening in chaparral habitat at elevations between 4500 – 6000 feet. Blooms May – July.	**Unlikely.** This species has been well documented within Tejon Ranch east of the Project. However, the Project areas are at or near the lower altitudinal range of this species, and suitable habitat was not observed within surveyed areas.
Tehachapi monardella (*Monardella linoides ssp. oblonga*)	CNPS 1B	Found on dry slopes and in granitic soils within montane coniferous forest and pinyon-juniper woodland habitats at elevations between 4700 – 8700 feet. Blooms June – August.	**Unlikely.** This species has been well documented in the vicinity of the Project. However, the Project areas are at or near the lower altitudinal range of this species, and suitable habitat was not observed within surveyed areas.
Tejon poppy *(Eschscholzia lemmonii ssp. kernensis)*	CNPS 1B	Occurs in the grasslands of the southern portion of the San Joaquin valley and the foothills of the Transverse mountain range. Found in elevations between 440 feet and 4,500 feet. Blooms March – April.	**Unlikely**. The Project area appears to be at or near the upper altitudinal range of this species and just south of the accepted native range. Fort Tejon State Historic Park, located approximately 3 miles north of the Project, represents the southernmost recorded observation. A focused survey for this species in 2007 and floristic surveys conducted between 2003 and 2006 within the Tejon Mountain Village Plan area resulted in no observations of this species (Dudek & USFWS, 2013).

Species	Status	Habitat	Occurrence on Project Site
Tracy's eriastrum (*Eriastrum tracyi*)	CR	Often found in open sections of chaparral, woodland, and valley-foothill grassland habitats. Grows in gravelly shale or clay at elevations between 1,035 and 7,875 feet. Blooms May – August.	**Possible**. This species is known to occur within Tejon Ranch near Castac Lake. Marginal habitat for this species was observed within the surveyed areas.

EXPLANATION OF OCCURRENCE DESIGNATIONS AND STATUS CODES

Present: Species observed on the site at time of field surveys or during recent past
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis
Possible: Species not observed on the site, but it could occur there from time to time
Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient
Absent: Species not observed on the site, and precluded from occurring there due to absence of suitable habitat

STATUS CODES

FE Federally Endangered
FT Federally Threatened
FPE Federally Endangered (Proposed)
FPT Federally Threatened (Proposed)
FC Federal Candidate

CE California Endangered
CT California Threatened
CCT California Threatened (Candidate)
CFP California Fully Protected
CSC California Species of Special Concern
CWL California Watch List
CCE California Endangered (Candidate)
CR California Rare

CNPS LISTING

1A Plants Presumed Extinct in California
1B Plants Rare, Threatened, or Endangered in California and elsewhere
2 Plants Rare, Threatened, or Endangered in California, but more common elsewhere

3.5.2 Impact Assessment

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

Less than Significant Impact with Mitigation Incorporated.

3.5.2.1 Special Status Plants and Sensitive Natural Communities

There are 31 regionally occurring special status plants that appeared on the CNDDB and IPaC database queries of the Project area, and the following 15 species were declared possible or likely to occur onsite, and therefore, could potentially be impacted by Project activities: Big Bear Valley woollypod (*Astragalus leucolobus*), calico monkeyflower (*Diplacus pictus/Mimulus pictus/Eunanus pictus*), Davidson's bush-mallow (*Malacothamnus davidsonii*), Fort Tejon woolly sunflower (*Eriophyllum lanatum* var. *hallii*), Lemmon's jewelflower (*Caulanthus lemmonii*), Mt. Pinos onion (*Allium howellii* var. *clokeyi*), pale-yellow layia (*Layia heterotricha*), Palmer's mariposa-lily (*Calochortus palmeri* var. *palmeri*), Piute Mountains navarretia (*Navarretia setiloba*), Robbins' nemacladus (*Nemacladus secundiflorus* var. *robbinsii*), salt spring checkerbloom (*Sidalcea neomexicana*), San Bernardino aster (*Symphyotrichum defoliatum*), short-jointed beavertail (*Opuntia basilaris* var. *brachyclada*), slender mariposa-lily (*Calochortus clavatus* var. *gracilis*), and Tracy's eriastrum (*Eriastrum tracyi*). The following sensitive natural communities have been mapped adjacent to Project areas: valley needlegrass grassland, wildflower field, Cottonwood Willow Riparian Forest, and valley oak woodland. Oak trees removal would not be part of proposed Project activities.

3.5.2.2 Special Status Animal Species

Nesting Birds

There are 17 regionally occurring special status bird species identified on the CNDDB and IPaC database queries of the Project area, and the following 15 species were declared possible or likely to occur onsite, and therefore, could potentially be impacted by Project activities. The Project site contains suitable nesting and foraging habitat for a variety of avian species, including the following special status: bald eagle (*Haliaeetus leucophalus*), burrowing owl (*Athene cunicularia*), California condor (*Gymnogyps californianus*), California horned lark (*Eremophilia alpestris actia*), Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), golden eagle (*Aquila chrysaetod*), grasshopper sparrow (*Ammodramus savannarum*), loggerhead shrike (*Lanius ludovicianus*), prairie falcon (*Falco mexicanus*), purple martin (*Progne subis*), tricolored blackbird (*Agelaius tricolor*), and yellow warbler (*Setophaga petechia*).

Reptiles and Amphibians

The following eight regionally occurring special status reptile and amphibian species could potentially occur within Project areas: California glossy snake (*Arizona elegans occidentalis*), California legless lizard (*Anniella* sp.), coast horned lizard (*Phrynosoma blainvillii*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), northern California legless lizard (*Anniella pulchra*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), Tehachapi slender salamander (*Batrachoseps stebbinsi*), western pond turtle and yellow-blotched salamander (*Ensatina eschscholtzii croceater*).

Mammals

The following mammals could potentially occur within Project areas: American badger (*Tazidea taxus*) and Tehachapi pocket mouse (*Perognathus alticola inexpectatus*). Therefore, the Project's construction activities could potentially impact these two special status species through injury, mortality, or loss of habitat. American badger and Tehachapi pocket mouse are both classified as Species of Special Concern in California. The Townsend's big-eared bat (*Corynorhinus townsendii*), a California Species of Special Concern, could roost within trees onsite or forage over Project areas.

Invertebrates

The Crotch bumble bee (*Bombus crotchii*) could potentially forage on flowering plants in Project areas. The Crotch bumble bee is a candidate for listing as an endangered species in California. As a candidate for listing, the species is temporarily afforded the same protections at State-listed endangered or threatened species until CDFW's status report is complete and a decision is made on the petitioned action.

Special Status Plant Species Absent from or Unlikely to Occur

31 regionally occurring special status plant species were identified on the CNDDB and IPaC queries of the Project area and surrounding lands, including: Abrams' oxytheca (*Acanthoscyphus parishii var. abramsii*), Baja navarretia (*Navarretia peninsularis*), Bakersfield cactus (*Opuntia basilaris var. treleasei*), Big Bear Valley woollypod (*Astragalus leucolobus*), calico monkeyflower (*Diplacus pictus* / *Mimulus pictus* / *Eunanus pictus*), California Orcutt grass (*Orcuttia californica*), Davidson's bush-mallow (*Malacothamnus davidsonii*), delicate bluecup (*Githopsis tenella*), Fort Tejon woolly sunflower (*Eriophyllum lanatum var. hallii*), Greata's aster (*Symphyotrichum greatae*), grey-leaved violet (*Viola pinetorum ssp. grisea*), Horn's milk-vetch *(Astralagus hornii var. hornii),* Kern Mallow *(Eremalche parryi ssp. kernensis),* Lemmon's jewelflower (*Caulanthus lemmonii*), Lost Hills crownscale *(Atriplex coronata var. vallicola),* Madera leptosiphon (*Leptosiphon serrulatus*), Mt. Gleason paintbrush (*Castilleja gleasoni*), Mt. Pinos onion (*Allium howellii var. clokeyi*), pale-yellow layia *(Layia heterotricha),* Palmer's mariposa-lily (*Calochortus palmeri var. palmeri*), Piute Mountains navarretia (*Navarretia setiloba*), Robbins' nemacladus (*Nemacladus secundiflorus var. robbinsii*), salt spring checkerbloom (*Sidalcea neomexicana*), San Bernardino aster (*Symphyotrichum defoliatum*), short-joint beavertail (*Opuntia basilaris var. brachyclada*), slender mariposa-lily (*Calochortus clavatus var. gracilis*), spreading navarretia (*Navarretia fossalis*), Tehachapi buckwheat (*Eriogonum callistum*), Tehachapi monardella (*Monardella linoides ssp. oblonga*), Tejon poppy *(Eschscholzia lemmonii ssp. kernensis),* and Tracy's eriastrum (*Eriastrum tracyi*). As explained in **Table 3-5**, the following nine plant species have been determined to be absent from the Project due to the Project's location outside of the accepted geographic or altitudinal range and/or the absence of suitable habitat onsite: Abrams' oxytheca, Bakersfield cactus, California Orcutt grass, grey-leaved violet, Kern Mallow, Lost Hills crownscale, Madera leptosiphon, Mt. Gleason paintbrush, and spreading navarretia. Similarly, the following seven species were determined to be unlikely to occur onsite: Baja navarretia, delicate bluecup, Greata's aster, Horn's milk-vetch, Tehachapi buckwheat, Tehachapi monardella, and Tejon poppy. Since there is little to no likelihood of these 16 special status plant species occurring onsite, implementation of the Project should have no effect on individual plants or populations of these species. Mitigation measures are not necessary to avoid impacts to these 16 species; however, the mitigation measures listed below would help provide protection to these species in the unlikely event they are detected onsite.

As explained in **Table 3-4**, of the 45 regionally occurring special status animal species, 19 were determined to be absent from or unlikely to occur in the vicinity due to Project's location outside of the accepted geographic or altitudinal range and/or the absence of suitable habitat onsite, including: arroyo toad (*Anaxyrus californicus*), blunt-nosed leopard lizard (*Gambelia sila*), California red-legged frog (*Rana draytonii*), coastal California gnatcatcher (*Polioptila californica californica*), conservancy fairy shrimp (*Branchinecta conservatio*), foothill yellow-legged frog (*Rana boylii*), green sea turtle (*Chelonia mydas*), least Bell's vireo (*Vireo bellii pusillis*), Mount Pinos sooty grouse (*Dendragapus fuliginosus howardi*), Nelson's antelope squirrel (*Ammospermophilus nelsoni*), pallid bat (*Antrozous pallidus*), Riverside fairy shrimp (*Streptocephalus wootoni*), San Joaquin kit fox (*Vulpes macrotis mutica*), southern rubber boa (*Charina umbratical*), southwestern willow flycatcher (*Empidonax traillii extimus*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), two-striped gartersnake (*Thamnophis hammondii*), vernal pool fairy shrimp (*Branchinecta lynchi*), and western spadefoot (*Spea hammondii*). Since it is highly unlikely that these species would occur onsite, implementation of the Project should have no impact on these 19 special status species through construction mortality, disturbance, or loss of habitat. Mitigation measures are not warranted.

For impacts related to both plant and animal special status species and species of concern, the following Mitigation Measures identified would reduce potential impacts to less than significant level and would ensure compliance with State and federal laws protecting these resources.

Mitigation Measures

BIO-1 (WEAP Training): Prior to initiating construction activities (including staging and mobilization), all personnel associated with Project construction shall attend mandatory Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in identifying special status resources that may occur in the Project area. The specifics of this program shall include identification of the sensitive species and suitable habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. This training will specifically discuss the conservation status of the California condor, in addition to all other special status species, describe the laws and regulations in place to provide protection of these species, identify the penalties for violation of applicable environmental laws and regulations, and a list of required protective measures to avoid "take." A fact sheet conveying this information, along with photographs or illustrations of sensitive species with potential to occur onsite, shall also be prepared for distribution to all contractors, their employees, and all other personnel involved with construction of the Project. All employees shall sign a form documenting that they have attended WEAP training and understand the information presented to them.

BIO-2 (Construction Operational Hours): Construction shall be conducted during daylight hours to reduce disturbance to wildlife that could be foraging within work areas.

BIO-3 (BMPs): The Project proponent will ensure that all workers employ the following best management practices (BMPs) in order to avoid and minimize potential impacts to special status species:

> ***BIO-3a:*** Vehicles shall observe a 15-mph speed limit while on unpaved access routes.
>
> ***BIO -3b:*** Workers shall inspect areas beneath parked vehicles prior to mobilization. If special status species are detected beneath vehicles, the individual will either be allowed to leave of its own volition or will be captured by the qualified biologist (must possess appropriate collecting/handling permits) and relocated out of harm's way to the nearest suitable habitat beyond the influence of the Project work area. "Take" of listed (rare, threatened, or endangered) is prohibited. If a listed species is observed within the Project area, the biologist will stop work and contact the appropriate regulatory agency (CDFW and/or USFWS) for guidance on how to proceed.
>
> ***BIO -3c:*** The presence of any special status species and/or any wildlife mortalities will be reported to the Project's designated biologist and the appropriate regulatory agencies (CDFW, USFWS, California State Parks Department, Tejon Ranch Conservancy, etc.).

BIO-4 (Avoidance): The Project's construction activities shall occur, if feasible, between September 1 and January 31 (outside of nesting bird season) in an effort to avoid impacts to listed species.

BIO-5 (Pre-construction Survey): A qualified biologist shall conduct pre-construction surveys specific to the following species:

> ***BIO -5a Nesting Birds:*** If activities must occur within nesting bird season (February 1 to August 31), The survey shall include the proposed work area and surrounding lands within 500 feet. If no active nests are observed, no further mitigation is required. Raptor nests are considered "active" upon the nest-building stage. All other nests are considered "active" by the presence of eggs or young.

BIO-5b Herpetological; Mammals; and Bees: A pre-construction survey of Project areas within 30 days prior to vegetation clearing or ground disturbing activities. Environmentally sensitive areas will be flagged for avoidance. If suitable habitat for regionally occurring special status reptiles and amphibians is detected on pre-construction surveys, construction monitoring will be required.

BIO -6 (Establish Buffers): On discovery of any active nests or listed species near work areas, the biologist shall determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question.. Construction buffers shall be identified with flagging, fencing, or other easily visible means, and shall be maintained until the biologist has determined that the nestlings have fledged, or construction has finished in that area.

BIO-7 (Monitor): A qualified biologist will conduct a pre-activity clearance survey each day and remain onsite to oversee all vegetation clearing and ground disturbing activities conducted within suitable habitat for special status species that were identified in the pre-construction surveys (BIO 5 a-b). The biological monitor must possess required collecting/handling permits. If a special status species is observed within Project areas, the biologist will stop work order and the individual will either be allowed to leave of its own volition or will be captured by the qualified biologist and relocated out of harm's way to the nearest suitable habitat beyond the influence of the Project work area. "Take" of listed (rare, threatened, or endangered) is prohibited. If a listed species is observed within the Project area, the biologist will stop work and contact the appropriate regulatory agency (CDFW and/or USFWS) for guidance on how to proceed

BIO-8 (Focused Survey): A qualified botanist/biologist shall conduct focused botanical surveys according to CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (2018).

BIO-9 (Formal Consultation): If rare plant individuals or populations or sensitive natural communities are detected within Project work areas during the focused botanical survey, the Project proponent shall initiate consultation with CDFW and/or USFWS. If CDFW and/or USFWS determines that "take" cannot be avoided, the Project proponent may be required to obtain an Incidental Take Permit (ITP).

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

No Impact. According to CNDDB, there are no recorded natural communities of special concern with potential to occur within the APE or vicinity. Additionally, no natural communities of special concern were observed during the biological survey. Therefore, implementation of the Project will have no impact on riparian habitat, or any other sensitive natural communities.

Mitigation Measures

No mitigation is warranted.

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

Less than Significant Impact. The Project is not located within or near protected wetlands. The Project would not impact or be located within or near marshes, vernal pools, or any coastal water source. The Project would be working near or adjacent to ephemeral streams and Cuddy Creek. The Project proposes to jack and bore

under the unnamed ephemeral streams at the pipeline alignment near FMHS. This would protect the streams from dredge and/or fill of construction spoils thereby staying outside of potentially jurisdictional waters and eliminating the need for regulatory water permits. The new pipeline alignment to be installed along the shoulder of Frazier Mountain Park Road would be maintained in the right-of-way. Cuddy Creek is to the north of the pipeline and would not be impacted as a result of trenching and placement of the new pipeline. No water is planned for diversion and activities around the ephemeral stream would occur in the dry season. As such, adverse effects on State or federally protected wetlands or waterways would be less than significant.

Mitigation Measures

Mitigation is not warranted.

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

Less Than Significant Impact. Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation.

The Project runs through a mountainous area that contains several ridges and valleys which are likely used for migratory and dispersal movements of large and small mammals. Creek beds of unnamed water features cross the Project site in multiple locations, which could serve as a corridor for wildlife inhabiting the surrounding sagebrush shrubland and grassland habitat. Even developed portions of the site that are frequently subject to human-related disturbance would be expected to be utilized as a wildlife movement corridor because this region offers an important linkage between patches of suitable habitat. Project activities would be temporary in nature and would return the disturbed areas to pre-construction condition. Project pipeline alignments along the roadway and I-5, and water tanks at the Chimney tank farm and FMHS would not impede wildlife movement. Project areas such as Well 04 site and the pipeline from FMHS to the Frazier Mountain Park Road have large enough open space surrounding these areas that migratory animals would continue to pass through these areas without impediment. Therefore, the proposed Project would result in a less than significant impact on regional wildlife movements.

Mitigation Measures

Mitigation is not warranted.

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

No Impact. Oak trees and oak woodlands are protected by a variety of State and local regulations, including the Los Angeles County Oak Tree Ordinance (Section 22.56.2050), the California Fish and Game Code (Sections 1360 to 1372) Oak Woodlands Conservation Act (AB 242), and California Public Resources Code Section 21083.4 (Senate Bill 1334). The Kern County General Plan, Tejon Mountain Village Specific and Community Plan, the TUMSHCP, the Tejon Ranchwide Management Plan, Los Angeles County General Plan, and the Los Angeles County Oak Woodlands Conservation Management Plan all contain oak tree and oak woodland conservation policies. State laws and the Los Angeles County Oak Woodlands Conservation Management Plan focus on conservation of oak woodlands, while the Los Angeles County Oak Tree Ordinance regulates impacts to individual oak trees. The Kern County General Plan contains policies related to both oak woodlands and individual oak trees.

There is at least one oak tree present along the proposed alignment. One mature valley oak (Quercus lobata) was observed along the alignment through the Lebec Northbound Rest Area. Oak woodlands and individual oak trees were observed throughout the vicinity of the Project. A review of aerial imagery shows individual trees present within the FMHS campus, and potential trees along the portion of the alignment through State lands. The Project does not propose removal of any trees to facilitate placement of water pipelines, tanks, or wells. As such there would be no conflict with tree ordinance, local policies, or any of the many Plans listed above.

Mitigation Measures

No mitigation is warranted.

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

Less than Significant Impact with Mitigation Incorporated The Tejon Ranch is within the Tehachapi Upland Multiple Species Habitat Conservation Plan (TUMSHCP). Combined, these parks and preservation areas comprise millions of acres of contiguous habitat for numerous rare and endangered species. On April 30, 2012, USFWS issued an Incidental Take Permit (ITP) under the Endangered Species Act in conjunction with the Tehachapi Upland Multiple Species Habitat Conservation Plan (TUMSHCP) for covered lands within Tejon Ranch, including the Project's Well 04 Site and associated pipelines within the Tejon Mountain Village Plan Area. The Well 04 Site is located within a region of Tejon Mountain Village (TMV) designated for development, per the Ranch-Wide Agreement; however, it is within "covered lands" and still subject to all of the provisions of the TUMSHCP. Implementing all the above mitigation measures would ensure compliance with the TUMSHCP reducing impacts to less than significant.

Mitigation Measures

BIO-1 through ***BIO-9***

3.6 Cultural Resources

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

3.6.1 Environmental Setting and Baseline Conditions

Cultural Resources field surveys were conducted by ASM Affiliates, Inc. on the APE between September and November 2019. A report entitled *Class III Inventory/Phase I Survey, Lebec County Water District and Frazier Mountain High School Water Project, Kern County, California* dated November 2019 (**Appendix C)** included a record search conducted through the Southern San Joaquin Valley Archaeological Information Center (SSJVAIC) of the California Historical Resources Information at California State University Bakersfield (CSUB) (dated September 16, 2019). The records search included a listing of approximately 27 recorded historic, prehistoric, and archaeological resources. The report determined there are no known or recorded sites within an approximately 0.5-mile radius of the APE.

Field survey methodology included walking fifteen-meter parallel transects with some overlapping and closer inspection where soil visibility conducive. The fieldwork encompassed walking approximately 4-miles and covering a 100-foot wide corridor, as well as across the water tank sites.

No cultural resources were noted during the field surveys. The surveys did not identify any no resources eligible for the California Register of Historical Resources within any of the Project's components.

3.6.2 Impact Assessment

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

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

Less than Significant Impact with Mitigation Incorporated. Field surveys were conducted between September and November 2019 and a cultural resources records search dated September 16, 2019 was provided by the SSJVAIC at CSUB. No historical or archaeological resources were identified during the field search. The records search determined that there are no recorded historical resources within the APE. Therefore, there is no impact that has the potential to cause a substantial adverse change in the significance of a historical resource. During Project excavation activities, there is an unlikely potential to unearth archaeological resources. With incorporation of MM CULT-1, impacts to archaeological resources that may potentially exist on site would be less than significant.

Mitigation Measures

CULT – 1 (Archaeological Remains): Should archaeological remains or artifacts be unearthed during any stage of Project activities, work in the area of discovery shall cease until the area is evaluated by a qualified archaeologist. If mitigation is warranted, the Project proponent shall abide by recommendations of the archaeologist.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant Impact with Mitigation Incorporated. There is no evidence or record that the Project has the potential to be an unknown burial site or the site of buried human remains. In the unlikely event of such a discovery, mitigation shall be implemented. With incorporation of MM CULT-2, impacts resulting from the discovery of remains interred on the APE would be less than significant.

Mitigation Measures

CULT – 2 (Human Remains): In the event that any human remains are discovered on the APE, the Kern County Coroner must be notified of the discovery (California Health and Safety Code, Section 7050.5) and all activities in the immediate area of the find or in any nearby area reasonably suspected to overlie adjacent human remains must cease until appropriate and lawful measures have been implemented. If the Coroner determines that the remains are not recent, but rather of Native American origin, the Coroner shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours to permit the NAHC to determine the Most Likely Descendent of the deceased Native American.

3.7 Energy

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

3.7.1 Environmental Setting and Baseline Conditions

Southern California Edison (SCE) and Pacific Gas & Electric (PG&E) both supply electricity to various components of the APE. SCE and PG&E obtain its power through hydroelectric, natural gas, and eligible renewable sources. SCE and PG&E continually produce new electric generation and natural gas sources and implements continuous improvements to gas lines throughout its service areas to ensure the provision of services to residents. The Project would require new sources of electric power to the LCWD Well No. 4 Site (via PG&E service) and Booster Pump Stations (via SCE service) at the FMHS Well Site. The well site and booster pump stations would be equipped with emergency backup diesel-powered (self-contained fuel storage) generators as well.

3.7.2 Impact Assessment

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact. The Project would require new sources of electric power to the LCWD Well No. 4 Site and Booster Pump Stations at the FMHS Well Site. Technology used in the water supply system would employ Best Management Practices and employ available energy efficient equipment. Increases in the use of energy as a result of the Project would be minimal in comparison to energy used in this existing water supply system and for its current users. As such impacts related to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction and its operation would be minimal and would be considered less than significant.

Mitigation Measures

No mitigation is warranted.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

b) Less than Significant Impact. Based on the analysis in the preceding discussion, the proposed Project would not conflict with current State energy efficiency or electricity supply requirements or any local plans or programs for renewable energy or energy efficiency requirements. Thus, the Project's impact would be less than significant.

Mitigation Measures

No mitigation is warranted

3.8 Geology and Soils

Geology and Soils				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

3.8.1 Environmental Setting and Baseline Conditions

Project specific soils characteristics are described in **Table 3-6** and in **Appendix B** within the Biological Report.

Table 3-6. Project Soil Characteristics

Project Soil Characteristics			
Map unit name	**Rating**	**Acres in AOI**	**Percent of AOI**
Gorman sandy loam, 9 to 15 percent slopes	Well drained	1.1	8.9
Gorman sandy loam, 15 to 30 percent slopes, eroded	Well drained	0.5	3.8
Gorman sandy loam, 30 to 50 percent slopes, eroded	Well drained	1.4	12.0
Greenfield sandy loam, 2 to 9 percent slopes	Well drained	0.3	2.4
Hanford coarse sandy loam, 2 to 9 percent slopes	Well drained	2.5	21.4
Hanford sandy loam, 2 to 9 percent slopes	Well drained	1.0	8.4
Hanford gravelly sandy loam, 2 to 9 percent slopes	Well drained	1.1	9.9
Xerofluvents, 0 to 5 percent slopes	Somewhat excessively drained	1.0	8.4
Hawk gravelly sandy loam, 9 to 15 percent slopes	Well drained	1.0	8.3
Frazier very gravelly sandy loam, 50 to 75 percent slopes	Well drained	0.1	0.6
Area not surveyed, access denied	Unknown	1.8	15.8
	Totals for APE	**11.8**	**100%**

3.8.1.1 Faults and Seismicity

Lebec is situated within an area of relatively frequent seismic activity. Some of the construction areas are located in the Frazier Mountain and Lebec fault zones as established by the Alquist-Priolo Fault Zoning Act (Section 2622 of Chapter 7.5, Division 2 of the California Public Resources Code). The San Andreas Fault runs through the Frazier Mountain fault zone.[5] The San Andreas fault is the dominant active tectonic feature of the Coast Ranges and represents the boundary of the North American and Pacific plates.

3.8.1.2 Liquefaction

The potential for liquefaction, which is the loss of soil strength due to seismic forces, is dependent on soil types and density, the groundwater table, and the duration and intensity of ground shaking. Although no specific liquefaction hazard areas have been identified in near Lebec, liquefaction is possible where unconsolidated sediments and a high water table coincide. Soil types in the area are not generally conducive to liquefaction because they are generally too coarse. Furthermore, the area does not have a high-water table which also minimizes liquefaction potential.

3.8.1.3 Soil Subsidence

Subsidence occurs when a large land area settles due to over-saturation or extensive withdrawal of groundwater, oil, or natural gas. These areas are typically composed of open-textured soils, high in silt or clay content, that become saturated. Lebec has experienced minimal subsidence and its elevation has remained relatively unchanged. Project specific soils characteristics are described in **Table 3-6** and in **Appendix B** within the Biological Report. **Table 3-6** Soils of the APE are listed in Soils on site represent a low risk of subsidence.

3.8.1.4 Dam and Levee Failure

Hundreds of dams and reservoirs have been built in California for water supply, flood control, hydroelectric power, and recreational uses. The nearest dam closest to Lebec is at Quail Lake, which is located at a lower elevation than Lebec. Lebec is not in an area that would be affected by dam failure.

[5] (Earthquake Zones of Required Investigation, 2019)

3.8.2 Impact Assessment

a) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

a-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.

a-ii) Strong seismic ground shaking?

Less than Significant Impact. The Project is located in an area of known significant seismic activity. Frazier Mountain Park Road is developed along the alignment of one of the fault lines associated with the Garlock Fault zone. The Project is also within the San Andreas Fault zone and is bisected by numerous San Andreas Fault lines. A map illustrating fault zones and fault lines within the Project's vicinity is provided as **Figure 3-2**.

Water storage tanks and water pipelines proposed by the Project have the potential to be damaged or rupture during a seismic event releasing large quantities of water suddenly or steadily for a period of time. Such an event may affect school operations temporarily at the athletic fields and parking lots Regarding the Chimney Canyon Tank Site, one house is located downstream of the tank in the event of a rupture; the water would be channeled away from the house to the extent practicable. The storage tanks would utilize seismic restraint designs consistent with the California Building Code and would be connected to a supervisory control and data acquisition (SCADA) control system that would identify any abnormalities prior to tank failure. Additionally, LCWD would routinely visit the sites for standardized inspections and maintenance needs. ,. The Project does not propose any structures for human occupancy and would not pose direct or indirect adverse effects related to rupture of a known fault or as a result of strong seismic ground shaking as a result of the Project. As such, impacts would be less than significant.

Mitigation Measures

No mitigation is warranted

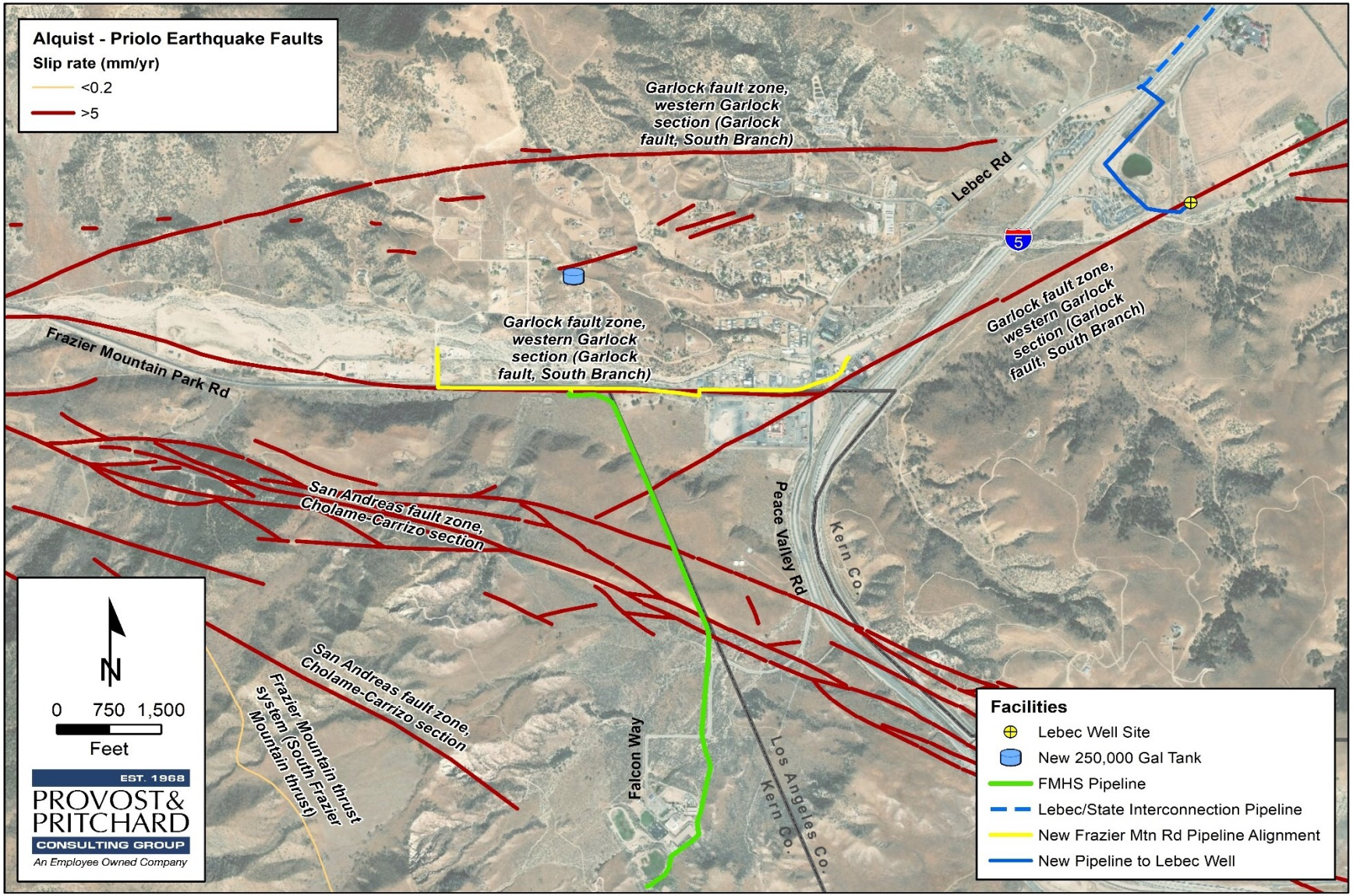


Figure 3-2. Alquist-Priolo Earthquake Fault Map

a-iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact. Liquefaction occurs when loose, water-saturated sediments lose strength and fail during strong ground shaking. Soil data and site characteristics were obtained from the United States Department of Agriculture Natural Resources Conservation Service soil survey of the APE. A listing of Project soil characteristics is provided in **Table 3-6.** Soils within the APE are well to excessively well drained, representing a low risk for liquefaction or seismic-related ground failure. In addition, the APE does not have a high-water table which further reduces potential for liquefaction. Furthermore, as mentioned above in Impact Assessments a-i and a-ii, strong seismic ground shaking is unlikely to occur. Any impacts related to seismic-related ground failure, including liquefaction, would be less than significant.

Mitigation Measures

No mitigation is warranted

a-iv) Landslides?

Less than Significant Impact. Landslides usually occur in locations with steep slopes and unstable soils. A section of the proposed APE is designated highly susceptible to landslide.[6] The APE is surrounded by the mountains and hills of the San Emigdio and Tehachapi Mountain Ranges. This area is not known for having landslides. According to the California Geological Survey (CGS), none of the APE is located within earthquake-induced landslide zone areas[7]. Additionally, most of the Project is within flatland and no rainfall-induced landslides or existing landslides are mapped. The last know landslide in this area was in 1978 and was the result of a heavy rain year[8] The Project does not involve structures meant for human occupancy and the majority of the Project would place pipeline components underground in mostly flat areas. Additionally, as stated above the water tanks would be connected to SCADA control system and LCWD would routinely visit the sites as normal O&M inspections. The Project would not directly or indirectly cause potential adverse effects due to landslides and impacts would be less than significant.

Mitigation Measures

No mitigation is warranted

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

Less than Significant Impact. Earthmoving activities associated with the Project would include excavation, trenching, grading, and construction over an area of approximately 11.8 acres. These activities could expose soils to erosion processes however, the extent of erosion would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. Dischargers whose Projects disturb one (1) 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 or more acres, are required to obtain coverage under the Statewide General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, and construction of linear underground facilities associated with water system improvements, but does not include regular maintenance activities performed to restore the original lines, grade, or capacity of the underground facilities. The Construction General Permit requires the development of SWPPP by a certified Qualified SWPPP Developer. Since the proposed areas of construction have relatively flat terrain with a low potential for soil erosion and would comply with the SWRCB requirements, the Project's impacts would be less than significant.

[6] (Fire Perimeters & Deep Landslide Susceptibility, 2019) Accessed 2019.
[7] (California Department of Conservation, 2019) August 10, 2020.
[8] (California Department of Conservation. 2015. Landslide Map and Report 79-04. Landslides in the Los Angeles Region, California – Effects of the February-March 1978 Rains., 1978) Accessed August 10, 2020.

Mitigation Measures

No mitigation is warranted

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than Significant Impact. As discussed in Section -a-ii and -a-iv, the potential for landslide or liquefaction is considered unlikely. Lateral spreading, subsidence, and collapse both on-site and off-site are also considered unlikely or less than significant for reasons previously discussed in these sections. Furthermore, the aforementioned physical properties of these soils make subsidence, liquefaction, lateral spreading, or other ground failure unlikely. Any impacts would be less than significant.

Mitigation Measures

No mitigation is warranted

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial direct or indirect risks to life or property?

No Impact. The soil types within the APE consist of approximately ten soils types as listed in Project specific soils characteristics are described in **Table 3-6** and in **Appendix B** within the Biological Report. These soil types can be described as visually sandy silt and are characterized as being well-drained to excessively well-drained and have a low shrink-swell potential and a low plasticity index characteristic. These soil types are not classified as expansive in Chapter 18 of the California Building Code, the most recently adopted building code that replaced the Uniform Building Code in California. Therefore, the soils within the APE would have no impact related to expansive soils.

Mitigation Measures

No mitigation is warranted

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The Project does not propose or require the installation of new septic tanks or alternative wastewater disposal systems. There would be no impact.

Mitigation Measures

No mitigation is warranted

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

Less than Significant Impact with Mitigation. There are no unique geological features or known fossil-bearing sediments in the vicinity of the proposed APE. Soils in these areas are Frazier very gravelly sandy loam and Gorman sandy loam. These soils have low potential as the rock units are poorly represent by fossil specimens. However, there remains the possibility for previously unknown, buried paleontological resources or unique geological sites to be uncovered during subsurface construction activities. Implementation of the following mitigation measure would require inadvertently discovery practices to be implemented should previously undiscovered paleontological resources be located. As such, impacts to undiscovered paleontological resources would be less than significant with mitigation.

Mitigation Measures

GEO-1 (Paleontological Monitor): In the event that paleontological resources or unique geologic features are discovered during construction, operations shall stop within 100 feet of the find, and a qualified paleontologist will be consulted to determine whether the resource requires further study. The qualified paleontologist will provide appropriate measures to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with CEQA Guidelines. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options.

3.9 Greenhouse Gas Emissions (GHG)

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

3.9.1 Environmental Setting and Baseline Conditions

The SJVAQMD does not currently have GHG thresholds. Therefore, the Bay Area Air Quality Management District's approach to developing a threshold of significance for GHG emissions was used to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce Statewide GHG emissions. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact and would be considered significant. If mitigation can be applied to lessen the emissions such that the project meets its share of emission reductions needed to address the cumulative impact, the project would normally be considered less than significant. Although the Project is not located in the Bay Area, the Bay Area Air Quality Management District's thresholds for significance are based on the Statewide AB 32 objectives.

3.9.1.1 Greenhouse Gases

The most abundant greenhouses gases in Earth's atmosphere and their emission sources include the following:

Carbon dioxide (CO_2) is an odorless, colorless natural greenhouse gas. CO_2 is emitted from natural and anthropogenic sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic out gassing. Anthropogenic sources include the burning of coal, oil, natural gas, and wood.

Methane (CH_4) is a flammable greenhouse gas. A natural source of methane is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and ruminants such as cattle.

Nitrous oxide (N_2O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load.

Water vapor is the most abundant, and variable greenhouse gas. It is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life.

Ozone (O_3) is known as a photochemical pollutant and is a greenhouse gas; however, unlike other greenhouse gases, ozone in the troposphere is relatively short-lived and, therefore, is not global in nature. Ozone is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds, nitrogen oxides, and sunlight.

Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. CFCs destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987.

Hydrofluorocarbons (HFCs) are synthetic chemicals that are used as a substitute for CFCs. Of all the greenhouse gases, HFCs are one of three groups (the other two are perfluorocarbons and sulfur hexafluoride) with the highest global warming potential. HFCs are human made for applications such as air conditioners and refrigerants.

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere; therefore, PFCs have long atmospheric lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest global warming potential of any gas evaluated. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

3.9.2 Impact Assessment

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

3.9.2.1 Short-Term Construction-Generated Emissions

Less than Significant Impact. Estimated construction-generated emissions are summarized in **Table 3-12**. As indicated, construction of the Project would generate maximum annual emissions of approximately 539.52 metric tons of carbon dioxide equivalent ($MTCO_2e$). Construction-related production of GHGs would be temporary and last approximately thirty-six months.

Table 3-7. Short-Term Construction-Generated GHG Emissions

Short-Term Construction-Generated GHG Emissions	
Construction Year	**Emissions (MT CO_2e)[1]**
2021	334.79
2022	178.33
2023	26.40
AB 32 Consistency Threshold for Mobile Sources	*1,100*
AB 32 Consistency Threshold for Stationary Sources	*10,000*
Exceed Threshold?	No

1. *Emissions were quantified using the CalEEmod, Version 2016.3.1. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.*

* As published in the (Bay Area Air Quality Management District's CEQA Air Quality Guidelines, 2020) Accessed 18 November 2019.

3.9.2.2 Long-Term Operational Emissions

Long-term operational emissions are summarized below in **Table 3-13**. Emissions resulting from the Project will be differ slightly from existing baseline conditions dependent on use of the emergency generator. Maintenance will continue to be provided on an as needed basis and the operational equipment, such as the use of stationary pumps, and would be similar to the existing systems, which results in negligible emissions.

Table 3-8. Project Operational-Year 2023 GHG Emissions

Long-Term Operational GHG Emissions	
	Emissions ($MTCO_2e$)[1]
Estimated Total Annual Operational CO_2e Emissions	16.43
*AB 32 Consistency Threshold for Land-Use Development Projects**	*1,100*
*AB 32 Consistency Threshold for Stationary Source Projects**	*10,000*
Exceed Threshold?	No

1. Emissions were quantified using the CalEEmod, Version 2016.3.2. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.

* As published in the (Bay Area Air Quality Management District's CEQA Air Quality Guidelines, 2020) Accessed 18 November 2019.

Mitigation Measures

No mitigation is warranted

b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. In accordance with SJVAPCD's recommended guidance, project-generated GHG emissions would be considered less than significant if: (1) the Project complies with applicable BPS; (2) operational GHG emissions would be reduced or mitigated by a minimum of 29 percent in comparison to business-as usual (year 2004) conditions; or (3) project-generated emissions would comply with an approved plan or mitigation program.

The SJVAPCD recognizes that the ARB's Cap-and-Trade regulation is an adopted State-wide plan for reducing or mitigating GHG emissions from targeted industries. In June of 2014, the SJVAPCD issued APR- 2025. In this policy document, the SJVAPCD concluded that the combustion of fossil fuels including fuels associated with on- and off-road vehicles, are subject to Cap-and-Trade requirements. The SJVAPCD further concluded that through implementation of the Cap-and-Trade regulation, project specific GHG emissions generated by fossil fuel use would be fully mitigated.

As noted above in **Table 3-8**, project-generated GHG emissions would be attributable to the consumption of fossil fuels associated with the operation of on- and off-road vehicles. As discussed above, the SJVAPCD has determined that project-generated GHG emissions associated with the use of fossil fuels would be fully mitigated through implementation of ARB's Cap-and-Trade regulation and, therefore, would be considered have a less than significant individual and cumulative impact on the environment.

As discussed earlier in this document, the Cap-and-Trade regulation is a key component in California's AB 32 GHG-reduction goals. On August 21, 2008, the SJVAPCD Governing Board approved the District's Climate Change Action Plan (CCAP). The CCAP and the adopted SJVAPCD Climate Change Action Plan includes various recommended measures for the reduction of GHG emissions associated with development projects. However, of the measures recommended, none are applicable to the Project.

The Project complies with the Bay Area Air Quality Management District's GHG emissions thresholds for significance. For the aforementioned reasons, implementation of the Project is not anticipated to conflict with any applicable plan, policy or regulation for reducing the emissions of GHGs, nor will the Project have a significant impact on the environment. The impact would be considered less than significant.

Mitigation Measures

No mitigation is warranted

3.10 Hazards and Hazardous Materials

Hazards and Hazardous Materials					
	Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g)	Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

3.10.1 Environmental Setting and Baseline Conditions

3.10.1.1 Hazardous Materials

The Hazardous Waste and Substances Sites List (Cortese List) is a document used by the State, local agencies, environmental planners and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code (GC) Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least annually, an updated Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. DTSC's EnviroStor database is an online data management system for tracking hazardous waste facilities for spills, cleanup, permitting efforts and enforcement with known or suspected contamination issue. DTSC's is responsible for maintaining this component of Cortese List data (DTSC, 2010). In addition to the EnviroStor database, the SWRCB Geotracker database provides specific

information on regulated hazardous waste facilities in California, including underground storage tank cases and non-underground storage tank cleanup programs, including Spills-Leaks-Investigations-Cleanups sites, Department of Defense sites, and Land Disposal program and unregulated spills and cleanup efforts.

3.10.1.2 Airports

The Project is located within Kern County and is within the jurisdiction of the Kern County Airport Land Use Compatibility Plan (ALUCP). The nearest airport public airport is the Tehachapi Municipal Airport located approximately 32.8 miles northwest of the Project. The nearest private airport, the Conover Air Lodge Airport is located approximately 10.7 miles southwest of the Project.

3.10.1.3 Emergency Response Plan

Kern County's Emergency Manager is responsible for maintaining the Kern County/Operational Area Emergency Operations Plan and overseeing the Emergency Operations Center (EOC). EOC is a centralized location to support multi-agency and/or multi-jurisdictional disaster response coordination and communication. EOC staff is responsible for maintaining the readiness of the County for all emergencies.

3.10.1.4 Sensitive Receptors

Sensitive receptors within the Project's vicinity consists of single-family homes and mobile home parks within 1,000 feet of Project construction areas. In addition, the campus of Frazier Mountain High School is a Project construction area. No other identified concentrations of sensitive receptors, such as hospitals or nursing homes, are within the project's vicinity.

3.10.2 Impact Assessment

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact. Project construction would take place in different areas of Lebec (see **Figure 2-3**) at varying times throughout the planned construction period from fall 2021 to spring 2023. Construction of the Project would involve the use of hazardous materials associated with construction equipment, such as diesel fuel, lubricants, and solvents. However, the contractor is required to and would implement a SWPPP and would comply with all California Occupational Safety and Health Administration (Cal/OSHA) regulations regarding regular maintenance and inspection of equipment, spill prevention, and spill remediation in order to reduce the potential for incidental release of pollutants or hazardous substances onsite. Furthermore, any potential accidental hazardous materials spills during construction are the responsibility of the contractor to remediate in accordance with industry best management practices and State and county regulations. The operational phase of the Project would not involve the use or transport of hazardous materials. Though the Project would operate on a portion of the Frazier Mountain High School campus, GHG emissions from the electric booster pumps would be minimal (see **Section 3.9**). Impacts would be less than significant.

Mitigation Measures

No mitigation is warranted

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

No Impact. The Project does not involve land that is listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the DTSC. A search of the DTSC EnviroStor database and the SWRCB Geotracker performed on October 1, 2019 determined that there are no known active hazardous waste generators or known hazardous material spill sites within the APE. There would be no impact.

Mitigation Measures

No mitigation is warranted

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 APE?

No Impact. The Project is not within two miles of a public airport or public use airport and would therefore not result in a safety hazard or expose people or workers to excessive noise. Therefore, there is no impact.

Mitigation Measures

No mitigation is warranted

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

Less than Significant Impact. The Project involves the construction of LCWD water system improvements enabling LCWD to supply FMHS with drinking water. Construction traffic associated with the Project would be minimal and temporary, and construction would take place over an approximate two-year span. Temporary road closures, detours, or lane diversions may be necessary for installing pipeline during construction. Disturbances to traffic patterns, such as a potential lane diversion, would be minimal, as there would be alternate routes available. Operational traffic would consist of vehicle trips associated with routine maintenance of the system. Therefore, Project-related impacts to emergency evacuation routes or emergency response routes on local roadways would be considered less than significant.

Mitigation Measures

No mitigation is warranted

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

Less than Significant. Portions of the APEs are within zones of very high Fire Hazard Severity, according to Cal Fire's Fire Hazard Safety Zone Maps.[9] During Project construction, limited numbers of construction personnel may be exposed to the potential of wildland fire. However, Project components would be installed in areas of existing development and would result in the provision of water for use in the event of a fire. People currently live, work, and attend school in the subject areas. Project implementation would not expose people or structures to significant new risks associated with wildland fire. Impacts would be less than significant.

Mitigation Measures

No mitigation is warranted

[9] (California Department of Forestry & Fire Protection, 2019) Accessed August 11, 2020.

3.11 Hydrology and Water Quality

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

3.11.1 Impact Assessment

The proposed Project objective is to meet water quality standards for drinking water. Currently the existing water is out of compliance with State regulations and exceeds MCLs for uranium and fluoride. To remedy this, the proposed Project would provide drinking water improvements by drilling a new deeper well (Well 04) and provide the necessary infrastructure to deliver the drinking water to new storage tanks. The existing water located at FMHS would be used for irrigation and fire protection purposes.

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

Less than Significant Impact. The Project would not adversely affect surface or ground water quality. The construction contractor is required to and would prepare and adhere to a SWPPP to prevent construction pollutants from entering receiving waters. Project operation is needed to improve water quality and comply

with drinking water standards. The Project does not involve waste discharge. Impacts would be less than significant.

Mitigation Measures

No mitigation is warranted

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin?

Less than Significant Impact. LCWD delivers approximately 200 acre-feet of water to its customers each year. FMHS currently uses approximately 58-acre feet of water per year, of which roughly 50 acre-feet is for irrigation, and the remaining 8 acre-feet are for domestic purposes. The proposed Project would enable LCWD to construct a new well to supply its existing customers, residual growth, and FMHS with clean drinking water. The FMHS irrigation water would continue to derive from the school's existing well, which currently exceeds MCLs for uranium and fluoride. The overall water demand for FMHS would remain similar to current baseline conditions; only the source of drinking water would change to LCWD water as part of the Project. This is consistent with Kern County's projected growth rate for water usage, less than 1 percent. Both the residual growth in the area and water used by the school are existing conditions, therefore, expanded water usage due to the proposed Project would be considered negligible with little expansion of existing or former water use. Therefore, the Project would not significantly decrease groundwater supplies nor interfere substantially with groundwater recharge.

Mitigation Measures

No mitigation is warranted

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

c-i) result in substantial erosion or siltation on- or off-site;

c-ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;

c-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

c-iv) impede or redirect flood flows?

d) Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundations?

Less than Significant Impact. The Project may result in minor alterations in drainage patterns as a result of grading and backfilling areas of construction. Stream channels are generally connected during ordinary flows and/or flood flows. There are existing ephemeral streams located within the APE. Effects to and from the seasonal stream flows are expected to not be significant as the design and installation of this pipeline would utilize jack and bore method under these areas as to not disturb the bed or banks of these streams. Work would be conducted in the dry season and would not impede water flow or cause diversion of water flows. Once the Project is complete, the areas disturbed would be returned to pre-construction conditions and match the existing grade of the area, thereby allowing historic storm water to continue flow in the same manner as they did prior to Project activities .Drainage in the area would also continue to percolate into the soil surrounding the Project's pipelines and other impervious surfaces. Sheet flow along developed areas such as the FMHS would continue to be discharged to existing drainage systems surrounding the school and near the water storage tanks. Any new impervious surfaces proposed by the Project would not have sufficient surface area such that

the existing drainage pattern of the area would be significantly impacted. Should a pipeline break due to a seismic event, clean drinking water would temporarily be discharged to the nearby drainage channel.
In order to minimize erosion and run-off during construction activities, a SWPPP must be implemented, and the contractor shall be required to comply with all Cal/OSHA regulations regarding regular maintenance and inspection of equipment, spill prevention, and spill remediation in order to reduce the potential for incidental release of pollutants or hazardous substances onsite. Furthermore, any potential sources of polluted runoff, such as accidental hazardous materials spills, that may occur during construction shall be remediated in accordance with industry best management practices and State and county regulations. Accordingly, impacts resulting from insignificant alterations to drainage patterns and the potential for the Project to result in impacts related to inundation by seiche, tsunami, or mudflow would be less than significant.

Mitigation Measures

No mitigation is warranted

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant Impact. Castac Lake Valley Groundwater Basin is subject to the Water Quality Control Plan for the Tulare Lake Basin. The LCWD Project would be constructed and operated in compliance with all facets of the Water Quality Control Plan. Project activities are in response to an exceedance of water quality MCLs for uranium and fluoride. Therefore, Project activities would provide compliance with water quality control standards once the Project is complete and meet drinking water health and safety requirements.

LCWD is a member of the Castac Basin Groundwater Sustainability Agency. In accordance with the Sustainable Groundwater Management Act (SGMA), basins with very low priority are authorized and encouraged, but not required, to be managed under a Groundwater Sustainability Plan (GSP). The GSA is currently proactively developing a GSP for the basin.

It is anticipated that the Project and LCWD would be subject to and held in compliance with all applicable water quality control and sustainable groundwater management plans. The Project would therefore have a less than significant impact.

Mitigation Measures

No mitigation is warranted

3.12 Land Use and Planning

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

3.12.1 Environmental Setting and Baseline Conditions

Although the APE encompasses 11.8 acres of disturbance, most of the Project's activities would be installed underground and would not include land use changes. Two new water tanks would be constructed above ground but located next to existing water tanks. Overall Project activities would not change the existing land use designations General Plan land use designations and zone districts of the APE and surrounding areas are illustrated in **Figure 2-4** and **Figure 2-5**, respectively, and listed below in **Table 3-9**. The Project also proposes to annex the territory of FMHS into the LCWD, construct necessary infrastructure and operate water system improvements necessary to improve water quality, enhance water supply reliability, expand water storage, and replace the FMHS drinking water supply by extending water service to FMHS.

Table 3-9. Existing Land Use, General Plan, and Zoning

Existing Land Use, General Plan, and Zoning			
Project Component	**Existing Land Use**	**General Plan Land Use Designation**	**Zoning**
Pipeline interconnection western side of I-5	Vacant Land	State or Federal Land	A-1, C-2, PD, GH, FPS, E (20)
I-5 connection (under freeway)	Vacant Land	State or Federal Land	A-1, FPS
Chimney Canyon Tank	Water Tank Site	Light Industrial	E (2 ½), RS, MH
Lebec Well No. 4 site	Vacant Land	Tejon Mountain Village Specific Plan (SP)	SP, RF
Frazier Mountain Road pipeline	Vacant Land	General Commercial, Service Industrial, Resource Management	M-1, M-2, FPS, CH, NR (20), PD
FMHS pipeline, booster pump station & water storage tank	School, Native Vegetation	Frazier Park/Lebec SP	A

3.12.2 Impact Assessment

a) Would the project physically divide an established community?

No Impact. The Project involves water system improvements to LCWD and FMHS in an effort to secure improved drinking water for the school. Construction would take place on vacant areas of LCWD and FMHS properties and within existing County rights-of-way or other private easements. Project implementation would not divide an established community so there would be no impact.

Mitigation Measures

No mitigation is warranted

b) Would the project cause a significant environmental conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. **Table 3-9** details the existing land use, general plan designation, and zoning for the APE. The Project involves water system improvements which are considered compatible uses in all of the land use designations and zone districts. Environmental effects of the proposed Project meets the intent of the applicable land use plan.

As described, overall Project activities would not change the existing land use designations and therefore would not conflict with any applicable land use plan for the County, or any specific plan, policy, or County regulations adopted for the purpose of avoiding or mitigating environmental effects and would have no impact.

Mitigation Measures

No mitigation is warranted

3.13 Mineral Resources

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

3.13.1 Impact Assessment

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The Project is not in a category of projects that would affect the availability of a mineral resource or access to mineral resources. The area of the proposed pipeline along Frazier Mountain Road is designated MRZ-2, significant mineral deposits are potentially present, however, implementation of the Project would not preclude mineral extraction from the area. Therefore, the Project would have no impact on mineral resources.

Mitigation Measures

No mitigation is warranted

3.14 Noise

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

3.14.1 Environmental Setting and Baseline Conditions

Kern County regulates noise as found in the Kern County Code of Ordinances[10]. Construction noise is deemed acceptable between the hours of 6:00 am to 9:00 pm during the weekdays and between 8:00 am to 9:00 pm on weekends. Noise is generally defined as unwanted or objectionable sound. Sensitive receptors to noise include, but may not be limited to hospitals, schools, daycare facilities, elderly/convalescent housing, and residences. With the exception of Frazier Mountain High School and a few scattered residences in the vicinity of the Chimney Canyon Tank, the Project is not located in the vicinity of noise sensitive land uses. Noise from the proposed Project would be short-term in nature and associated with temporary construction activities. O&M activities would remain consistent with existing operational activities and would not create additional increase in ambient noise levels. A substantial portion of the Project is located adjacent to I-5 and Frazier Mountain Park Road, a significant transportation noise source running through the planning area.

The closest airport to the APE is located 9.09 miles from Lebec on the southeast side of Quail Lake. This is a private airport and currently holds in operation one small multi-engine and five small single-engine planes[11].

[10] (Kern County. Code of Ordinances, Title 8 Health and Safety, Chapter 8.36 – Noise Control, 2020)Accessed on August 11, 2020.
[11] (AirNav. Quail Lake Sky Park Airport. FAA Information Effective as of July 16, 2020, 2020)Accessed on August 11, 2020.

3.14.2 Impact Assessment

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

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

Less than Significant Impact. The APE is situated in an area already affected by baseline conditions involving significant transportation noise emanating from I-5, a major interstate highway with four lanes of traffic in each direction, and Frazier Mountain Park Road.

Activities associated with construction could result in temporary elevated noise levels and groundborne vibration. Typical construction equipment may include backhoes, tractors, air compressors, scrapers, pavers, concrete mixers, and numerous other miscellaneous tools and equipment. Construction of the Project would result in an increase in ambient noise and equipment related groundborne vibration levels in the immediate vicinity of the Project. Noise and vibration as a result of construction would be temporary. Work near FMHS would strive to be scheduled in the summer months outside of the planned school year. In areas where noise reduction may be necessary such as near the existing Chimney tanks, implementation of usual and customary noise control measures, such as the installation of mufflers or engine casings on construction equipment, would result in noise reduction of 5–10 dBA per source. Additionally, construction activities would occur during daylight hours and would comply with the Kern County Code of Ordinances. The remaining activities would be installing pipelines along existing roads and I-5 southbound shoulder and through open lands with no surrounding sensitive receptors.

Project O&M would continue to generate some localized noise related to (pumps, motors, and generators) but would not increase ambient noise levels. Well 04 site would have a small increase in ambient noise due to the installation of the new well and associated pumps and backup generator needs. This site is adjacent to I-5 and the northbound rest stop. The ambient noise from operations of the pump would not increase ambient noise above the continuous I-5 traffic sounds. Furthermore, the Project's construction is not located near or adjacent to hospitals, or nursing homes.

As such, impacts related to the Project's generation of ambient noise and groundborne vibration both during construction and operation would be considered less than significant.

Mitigation Measures

No mitigation is warranted

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 APE to excessive noise levels?

No Impact. The Project is not within two miles of a public airport or public use airport (Kern County ALUCP). Therefore, the Project would have no impact.

Mitigation Measures

No mitigation is warranted

3.15 Population and Housing

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

3.15.1 Impact Assessment

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

Less than Significant Impact. The Project involves water system improvements of LCWD to deliver clean drinking water to FMHS. The Project would provide a new clean water source where an existing water source currently exists and would allow for minor increases in water delivery (less than 1% annual growth is anticipated for the community of Lebec). The Project has the potential to indirectly induce population growth through the removal of impediments related to water delivery; however, such growth would likely be that already anticipated by the County's General Plan Land Use Element. Further, the Project does not propose to introduce new housing or jobs in the area. Therefore, the removal of impediments to water delivery and improvements to the quality of water delivered would be beneficial to consumers and would result in less than significant impacts to environment.

Mitigation Measures

No mitigation is warranted

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The subject properties do not feature existing residences and therefore, would not displace any housing or people.

Mitigation Measures

No mitigation is warranted

3.16 Public Services

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

3.16.1 Environmental Setting and Baseline Conditions

Fire Protection: The closest existing Fire Department is Station No. 56, generally located 1,600 feet north of the proposed site of the new well.

Police Protection: Kern County Sheriff's Department has a location approximately three miles west of the proposed site of the new Chimney Canyon Tank.

Schools: The Project is located in the El Tejon Unified School District and involves services at the Frazier Mountain High School.

Parks: Frazier Mountain Park is located approximately three miles west of the site of the proposed new Chimney Canyon Tank.

Landfills: The project would be served by Kern County's Bena Landfill. The Lebec transfer station to the Bena Landfill is located at 300 Landfill Road within the community of Lebec.

3.16.2 Impact Assessment

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 public services: fire and police protection, schools, parks, and landfills?

Less than Significant Impact. The Project would not significantly impact public services in the jurisdiction related to fire protection, police protection, parks, or landfill facilities. The Project would provide a new water source for an existing school, increase the capacity and redundancy of an existing water purveyor and provide improved water service for fire protection . The students, associated staff, and residents serviced are currently residents of the community for which the listed services are currently provided. The Project would not significantly increase service demands, service ratios, response times, or other performance objectives for any of these public services nor require construction of any such new facilities. Project impacts would be less than significant.

Mitigation Measures

No mitigation is warranted

3.17 Recreation

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

3.17.1 Impact Assessment

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

No Impact. The water system improvement projects would have no effect on neighborhood and regional parks or other recreational facilities. There would be no impact.

Mitigation Measures

No mitigation is warranted

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

No Impact. The Project does not involve recreational facilities and it would not require the construction or expansion of existing recreational facilities. There would be no impact.

Mitigation Measures

No mitigation is warranted

3.18 Transportation

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

3.18.1 Impact Assessment

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

Less than Significant Impact. The proposed water system improvements would have little to no effect on the circulation system with the possible exception of some minor detours or delay times during construction activities within road rights-of-way. FMHS and the site of the proposed Chimney Canyon Tank are developed with existing water system infrastructure. The site of the new well would require periodic maintenance but this would not result in a significant increase in vehicle miles traveled for LCWD or the area as a whole. The remainder of the Project includes underground pipelines, which would require infrequent maintenance. Impacts to the circulation system during the construction period would be temporary in nature and would therefore be less than significant.

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

No Impact. CEQA Guidelines Section 15064.3(b) establishes criteria for analyzing transportation impacts that are generally associated with land use and transportation projects or changes in land use. The Project is not such a project, it is the construction of water supply system improvements and consolidation of services related to water supply. The project does not propose any changes in land use. The Project would have no impact.

Mitigation Measures

No mitigation is warranted

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

d) Would the project result in inadequate emergency access?

No Impact. The Project does not propose any changes to street alignments or intersections. The Project does not include geometric design features affecting roadways or landforms and would not therefore result in incompatible uses. There would be no impact.

Mitigation Measures

No mitigation is warranted

3.19 Tribal Cultural Resources

Tribal Cultural Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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	☐	☒	☐	☐
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.	☐	☒	☐	☐

3.19.1 Environmental Setting and Baseline Conditions

Public Resources Code Section 21080.3.1, et seq. (codification of AB 52, 2013-14)) requires that a lead agency, within 14 days of determining that it would undertake a project, must notify in writing any California Native American Tribe traditionally and culturally affiliated with the geographic area of the project if that Tribe has previously requested notification about projects in that geographic area. The notice must briefly describe the project and inquire whether the Tribe wishes to initiate request formal consultation. Tribes have 30 days from receipt of notification to request formal consultation. The lead agency then has 30 days to initiate the consultation, which then continues until the parties come to an agreement regarding necessary mitigation or agree that no mitigation is needed, or one or both parties determine that negotiation occurred in good faith, but no agreement would be made.

Tribal Consultation was conducted by ASM Affiliates, Inc. for the Project on behalf of LCWD. A Sacred Lands File search was complete on September 16, 2019 and documentation of Tribal Consultation is included in the report entitled *Class III Inventory/Phase I Survey, Lebec County Water District and Frazier Mountain High School Water Project, Kern County, California* dated November 2019 (**Appendix C**). Based on the NAHC records, no sacred sites or traditional cultural places had been identified within or adjacent to the study area. Outreach letters were sent and follow-up calls to tribal organizations on the NAHC contact list were made. A call from the Big Pine Tribe of Owens Valley was received and, upon receiving additional Project information, the representative of the tribe expressed no concern over the Project and did not request additional consultation.

3.19.2 Impact Assessment

a) 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:

a-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)

a-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.

Less than Significant Impact with Mitigation Incorporated. Pursuant to Public Resources Code Section 21018.3.1, on September 16, 2019, ASM Affiliates, on behalf of the District, sent notification of consultation opportunity to individuals identified by the NAHC as representative of tribes in the vicinity of the Project, via certified mail/return receipt. The notification included a map of the area, and a description of the Project. In accordance with the law, the letter provided 30 days from receipt of the letter to request consultation in writing. As previously discussed, a telephone call from the Big Pine Tribe of Owens Valley was received and, upon receiving additional Project information, the representative of the tribe expressed no concern over the Project and did not request additional consultation. No other tribes responded. As a result, less than significant impacts to tribal resources are expected. However, **MM CULT-2**, listed in **Section 3.6**, is recommended in the unlikely event cultural materials or human remains are unearthed during excavation or construction.

Mitigation Measures

Refer to Mitigation Measure CULT-2, in **Section 3.6**.

3.20 Utilities and Service Systems

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

3.20.1 Impact Assessment

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

Less than Significant Impact. The Project proposes to expand the District's water service area by annexing the Frazier Mountain High School and constructing and installing water system improvements to provide safe drinking water within the District that meets state quality standards. Construction of the water system improvements would require the addition of motors and generators to power water supply equipment. No telecommunications facilities or natural gas supplies would be needed or affected by the Project. The area is served by Southern California Edison (SCE) and Pacific Gas & Electric (PG&E). The service providers incrementally expand and update their service systems as needed to serve its users. As the Project is the replacement and/or supplement to an existing water supply system, the Project would result in insignificant expansion to water and electric power facilities or equipment, the environmental impacts of which would be considered less than significant.

Mitigation Measures:

No mitigation is warranted.

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

Less than Significant Impact. The purpose of the Project is to replace an existing water supply that is not in compliance with current water quality standards. The Project would supply water to existing users and planned residual growth within the District consistent with the County adopted General Plan and in compliance with discretionary Zoning Ordinance entitlements and accompanying CEQA clearance documentation, as required. As part of the Castac Basin Groundwater Sustainability Agency, LCWD would help develop and adhere to the Groundwater Sustainability Plan the GSA adopts. The basin is considered very low priority regarding overdraft by the California Department of Water Resources. FMHS's drinking water use is historically approximately 8 acre-feet annually and demand is not expected to increase. FMHS's water requirements would not significantly reduce LCWD's water supply. Project impacts would be less than significant.

Mitigation Measures

No mitigation is warranted

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

No Impact. The Project would not require any new waste systems and would therefore have no impact on the capacity of existing wastewater treatment facilities.

Mitigation Measures

No mitigation is warranted

d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

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

Less than Significant Impact. Solid waste would only be generated during the Project's construction phase. Because solid waste generated during construction would be limited in both the amount of waste generated and the duration of occurrence, impacts related to solid waste generation and compliance with reduction statutes related to solid waste would be less than significant.

Mitigation Measures

No mitigation is warranted

3.21 Wildfire

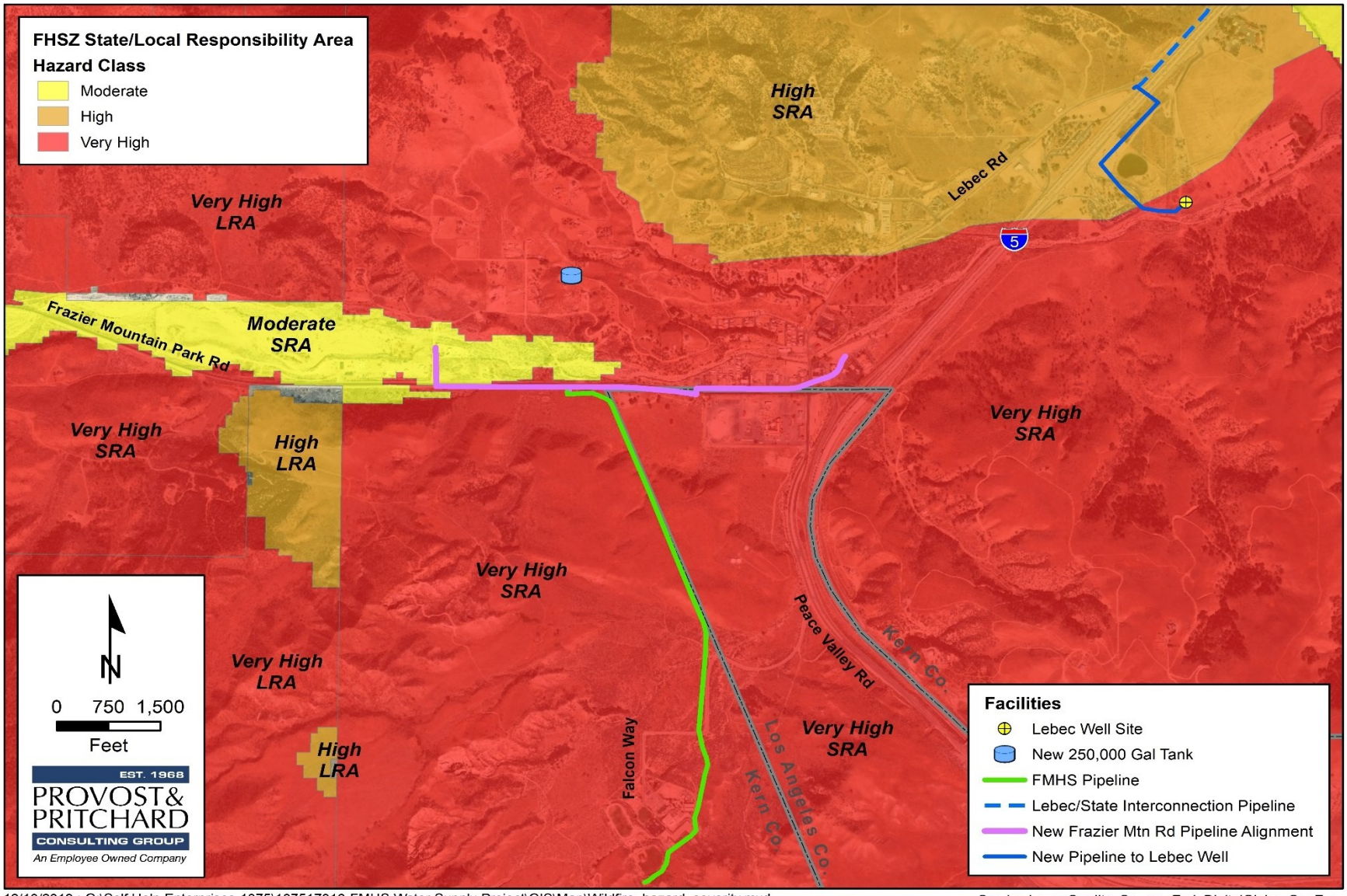
Wildfire					
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Substantially impair an adopted emergency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

3.21.1 Environmental Setting and Baseline Conditions

The entire APE is located within State Responsibility Areas, which are recognized by the California Board of Forestry and Fire Protection (CAL Fire) as areas where the agency is the primary emergency response agency responsible for fire suppression and prevention. CAL Fire firefighters, fire engines, and aircraft respond to wildland fires as well as other emergencies throughout more than 31 million acres of California's wildlands.[12]

Most of the APE has been classified by CAL Fire as a Very High Fire Hazard Severity Zone (see **Figure 3-3**). These areas are most likely to experience wildfire and structures in these zones can be potentially impacted. The Project does not propose to build or work within habitable structures. Project activities would occur near a few rural residential houses surround the Chimney water tanks and the FMHS. Additionally, during construction, limited numbers of construction laborers may be exposed to the potential of wildland fire. However, as part of the proposed project, infrastructures would be installed in areas of existing development and provide additional water for use in the event of a fire.

[12] (State Responsibility Area Viewer, 2019)



12/10/2019 : G:\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\Wildfire_hazard_severity.mxd

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye,

Figure 3-3. Fire Hazard Severity Map

3.21.2 Impact Assessment

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?
Less than Significant Impact. Though the Project is located in a state responsibility area and portions of the land lie with a Very High Fire Hazard Severity Zone, the Project does not involve habitable structures. Where construction is necessary in rights-of-ways, typical traffic control measures, as approved by Kern County Public Works and Caltrans, would provide the necessary diversion of traffic that would allow traffic to continue around the temporary work areas, including emergency response personnel. Project activities would not create any permanent obstructions to divert emergency responders and would not impair an adopted emergency response plan or impede in any necessary evacuation due to a wildfire. As such, impairment of an adopted emergency response plan or emergency evacuation plan would be less than significant.

Mitigation Measures

No mitigation is warranted

b) Would the project, due to slope, prevailing winds, or other factors exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire?
Less than Significant Impact. The Project proposes construction of water system improvements. It is not anticipated that the Project would exacerbate the wildfire risks beyond existing conditions. As with normal construction practices, a water truck would be made available on-site both for dust control and fire suppression during dry hazardous conditions. Additionally, the Project does not involve habitable structures, therefore Project impacts are less than significant.

Mitigation Measures

No mitigation is warranted

c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
Less than Significant Impact. The Project would not require installation or maintenance of roads, fuel breaks, emergency water sources, or other similar utilities. The Project, which is itself a water supply source, would necessitate the construction of a new power line serving Well No. 4. The booster pump station at the FMHS Well Site would be equipped with a diesel fuel tank. Such facilities associated with the Project may introduce insignificant new sources of infrastructure, however said sources would not significantly exacerbate existing fire risk in the area. The Project as a whole would reduce such risks by contributing to water supply sources. The Project would, therefore, have a less than significant impact.

Mitigation Measures

No mitigation is warranted

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?
Less than Significant Impact. The Project does not propose changes in grade, drainage, or slope stability. The Project does involve the construction of water storage tanks and if ruptured during a catastrophic event, may

result in releasing large quantities of water suddenly or steadily for a period of time . Such an event at the FMHS tank site may affect school operations temporarily at the athletic fields and parking lots but would not pose significant threat to life or safety. Regarding the Chimney Canyon Tank Site, one house is located downstream of the tank and in the event of a rupture the water would be channeled away from the house to the extent practicable. The Project would have a less than significant impact.

Mitigation Measures

No mitigation is warranted

3.22 CEQA Mandatory Findings of Significance

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

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

Less than Significant Impact with Mitigation Incorporated. The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Project, with incorporation of mitigation measures, would have a less than significant effect on the environment. The potential for impacts to biological resources, cultural resources, and tribal cultural resources from the implementation of the proposed Project would be less than significant with the incorporation of the mitigation measures identified in this analysis. Accordingly, the proposed Project would involve no potential for significant impacts through the degradation of the quality of the environment, the reduction in the habitat or population of fish or wildlife, including endangered plants or animals, the elimination of a plant or animal community or example of a major period of California history or prehistory

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

Less than Significant Impact with Mitigation Incorporated. CEQA Guidelines Section 15064(i) States that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of

the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. The Project involves the construction and operation of water system improvements to meet drinking water requirements and to better serve LCWD customers and also for the purpose of consolidating the FMHS water system with LCWD, the effects of which would not result in significant cumulatively considerable impacts. Implementation of the proposed Project would not result in significant cumulative impacts and all potential impacts would be reduced to less than significant through the implementation of mitigation measures and basic regulatory requirements incorporated into Project design.

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

Less than Significant Impact. The analysis conducted in this Initial Study results in a determination that the Project would have less than a significant adverse effect on human beings, both directly and indirectly, providing all recommended mitigation measures are adopted.

3.23 Determination: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR 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

9-23-2020
Date

Rick Rockett
Printed Name/Position

This page left intentionally blank.

Chapter 4 Mitigation Monitoring and Reporting Program

This Mitigation Monitoring and Reporting Program (MMRP) has been formulated based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for water system improvements for FMHS and the consolidation of services by LCWD. The MMRP lists mitigation measures recommended in the IS/MND for the Project and identifies monitoring and reporting requirements.

Table 4-1 presents the mitigation measures identified for the proposed Project. Each mitigation measure is identified with an acronym of the topical section to which it pertains, a hyphen, and the mitigation measure number. For example, AQ-2 would be the second mitigation measure identified in the Air Quality analysis of the IS/MND.

The first column of **Table 4-1** identifies the mitigation measure. The second column, entitled "When Monitoring is to Occur," identifies the time the mitigation measure should be initiated. The third column, "Frequency of Monitoring," identifies the frequency of the monitoring of the mitigation measure. The fourth column, "Agency Responsible for Monitoring," names the public agency ultimately responsible for ensuring that the mitigation measure is implemented. The last columns will be used by the District to ensure that individual mitigation measures have been complied with and monitored.

Table 4-1. Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
Biological Resources					
BIO-1 (WEAP Training):					
Prior to initiating construction activities (including staging and mobilization), all personnel associated with Project construction shall attend mandatory Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in identifying special status resources that may occur in the Project area. The specifics of this program shall include identification of the sensitive species and suitable habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. This training will specifically discuss the conservation status of the California condor, in addition to all other special status species, describe the laws and regulations in place to provide protection of these species, identify the penalties for violation of applicable environmental laws and regulations, and a list of required protective measures to avoid "take." A fact sheet conveying this information, along with photographs or illustrations of sensitive species with potential to occur onsite, shall also be prepared for distribution to all contractors, their employees, and all other personnel involved with construction of the Project. All employees shall sign a form documenting that they have attended WEAP training and understand the information presented to them.	Prior to construction	During Construction activities	LCWD		
BIO-2 (Construction Operational Hours):					
Construction shall be conducted during daylight hours to reduce disturbance to wildlife that could be foraging within work areas.	During Construction activities	During Construction activities	LCWD		
BIO-3 (Best Management Practices):					
The Project proponent will ensure that all workers employ the following best management practices (BMPs) in order to avoid and minimize potential impacts to special status species: **BIO-3a:** Vehicles shall observe a 15-mph speed limit while on unpaved access routes. **BIO -3b:** Workers shall inspect areas beneath parked vehicles prior to mobilization. If special status species are detected beneath vehicles, the individual will either be allowed to leave of its own volition or will be captured by the qualified biologist (must possess appropriate collecting/handling permits) and relocated out of harm's way to the nearest suitable habitat beyond the influence of the Project work area. "Take" of listed (rare,	During Construction activities	During Construction activities	LCWD		

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
threatened, or endangered) is prohibited. If a listed species is observed within the Project area, the biologist will stop work and contact the appropriate regulatory agency (CDFW and/or USFWS) for guidance on how to proceed. **BIO -3c:** The presence of any special status species and/or any wildlife mortalities will be reported to the Project's designated biologist and the appropriate regulatory agencies (CDFW, USFWS, California State Parks Department, Tejon Ranch Conservancy, etc.).					
BIO-4 (Avoidance):					
The Project's construction activities shall occur, if feasible, between September 1 and January 31 (outside of nesting bird season) in an effort to avoid impacts to listed species.	Prior to construction	During nesting season	LCWD		
BIO-5 (Pre-construction Survey):					
A qualified biologist shall conduct pre-construction surveys specific to the following species: **BIO -5a Nesting Birds:** If activities must occur within nesting bird season (February 1 to August 31), The survey shall include the proposed work area and surrounding lands within 500 feet. If no active nests are observed, no further mitigation is required. Raptor nests are considered "active" upon the nest-building stage. All other nests are considered "active" by the presence of eggs or young. **BIO-5b Herpetological; Mammals; and Bees:** A pre-construction survey of Project areas within 30 days prior to vegetation clearing or ground disturbing activities. Environmentally sensitive areas will be flagged for avoidance. If suitable habitat for regionally occurring special status reptiles and amphibians is detected on pre-construction surveys, construction monitoring will be required.	February 1 to September 15	30-days prior	LCWD		
BIO -6 (Establish Buffers):					
On discovery of any active nests or listed species near work areas, the biologist shall determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. Construction buffers shall be identified with flagging, fencing, or other easily visible means, and shall be maintained until the biologist has determined that the nestlings have fledged, or construction has finished in that area.	On discovery	During Construction activities as needed	LCWD		

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
BIO-7 (Monitor):					
A qualified biologist will conduct a pre-activity clearance survey each day and remain onsite to oversee all vegetation clearing and ground disturbing activities conducted within suitable habitat for special status species that were identified in the pre-construction surveys (BIO 5 a-b). The biological monitor must possess required collecting/handling permits. If a special status species is observed within Project areas, the biologist will stop work order and the individual will either be allowed to leave of its own volition or will be captured by the qualified biologist and relocated out of harm's way to the nearest suitable habitat beyond the influence of the Project work area. "Take" of listed (rare, threatened, or endangered) is prohibited. If a listed species is observed within the Project area, the biologist will stop work and contact the appropriate regulatory agency (CDFW and/or USFWS) for guidance on how to proceed	Prior to construction	During Construction activities as needed	LCWD		
BIO-8 (Focused Survey):					
A qualified botanist/biologist shall conduct focused botanical surveys according to CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (2018).	Prior to construction	During Construction activities as needed	LCWD		
BIO-9 (Formal Consultation):					
If rare plant individuals or populations or sensitive natural communities are detected within Project work areas during the focused botanical survey, the Project proponent shall initiate consultation with CDFW and/or USFWS. If CDFW and/or USFWS determines that "take" cannot be avoided, the Project proponent may be required to obtain an Incidental Take Permit (ITP).	On discovery	During Construction activities as needed	LCWD		
Cultural Resources					
CULT – 1 (Archaeological Remains):					
Should archaeological remains or artifacts be unearthed during any stage of Project activities, work in the area of discovery shall cease until the area is evaluated by a qualified archaeologist. If mitigation is warranted, the Project proponent shall abide by recommendations of the archaeologist.	In the event archaeological resources are uncovered	During excavation	LCWD		
CULT – 2 (Human Remains):					
In the event that any human remains are discovered on the APE, the Kern County Coroner must be notified of the discovery (California Health and Safety Code, Section 7050.5) and all activities in the immediate area of the find or in any nearby area reasonably suspected to overlie adjacent human remains must cease until appropriate and lawful measures have been implemented. If the Coroner determines that the remains are not recent, but rather of Native American origin, the Coroner	In the event human remains are uncovered	During excavation	LCWD		

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours to permit the NAHC to determine the Most Likely Descendent of the deceased Native American.					
Geology and Soils					
GEO-1 (Paleontological Monitor):					
In the event that paleontological resources or unique geologic features are discovered during construction, operations shall stop within 100 feet of the find, and a qualified paleontologist will be consulted to determine whether the resource requires further study. The qualified paleontologist will provide appropriate measures to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with CEQA Guidelines. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options	In the paleontological resources are uncovered	During excavation	LCWD		

This page left intentionally blank.

Chapter 5 References

(2020). Retrieved from iNaturalist.org web application: http://www.inaturalist.org

AirNav. Quail Lake Sky Park Airport. FAA Information Effective as of July 16, 2020. (2020). *AirNav. Quail Lake Sky Park Airport. FAA Information Effective as of July 16, 2020.* Retrieved from AirNav. Quail Lake Sky Park Airport. FAA Information Effective as of July 16, 2020: http://www.airnav.com/airport/CL46

Bay Area Air Quality Management District's CEQA Air Quality Guidelines. (2020). *Bay Area Air Quality Management District's CEQA Air Quality Guidelines.* Retrieved from Bay Area Air Quality Management District's CEQA Air Quality Guidelines: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

California Building Industry Association v. Bay Area Air Quality Management District, S213478 (California Supreme Court December 17, 2015).

California Department of Conservation. (1988). *Special Report 158, Mineral Land Classification:Aggregate Materials in the Fresno Production-Consumption Region.* Retrieved July 12, 2019, from https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc

California Department of Conservation. (1999). *Open File Report 99-02, Update of Mineral Land Classification: Aggregate Materials in Fresno Production-Consumption Region, California.* Retrieved July 12, 2019, from https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc

California Department of Conservation. (2019, October 19). *Earthquake Zones of Required Investigation.* Retrieved from California Department of Conservation: https://maps.conservation.ca.gov/cgs/EQZApp/

California Department of Conservation. (2019, October 9). *Fire Perimeters & Deep Landslide Susceptibility.* Retrieved from California Department of Conservation: https://maps.conservation.ca.gov/cgs/Firelandslide/

California Department of Conservation. (2019, July 12). *FMMP - Report and Statistics.* Retrieved from Farmland Mapping and Monitoring Program: https://www.conservation.ca.gov/dlrp/fmmp/Pages/Map-Categories,-Criteria,-and-Data.aspx

California Department of Conservation. (2019, October 9). *Landslide Inventory.* Retrieved from California Department of Conservation: https://maps.conservation.ca.gov/cgs/lsi/

California Department of Conservation. 2015. Landslide Map and Report 79-04. Landslides in the Los Angeles Region, California – Effects of the February-March 1978 Rains. (1978). *California Department of Conservation. 2015. Landslide Map and Report 79-04. Landslides in the Los Angeles Region, California – Effects of the February-March 1978 Rains.* Retrieved from California Department of Conservation. 2015. Landslide Map and Report 79-04. Landslides in the Los Angeles Region, California – Effects of the February-March 1978 Rains.: https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=landsli`des

California Department of Finance. (2019, July 26). *E-1 Population Estimates for Cities, Counties, and the State-January 1, 2018 and 2019.* Retrieved July 26, 2019, from California Department of Finance: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-1/

California Department of Finance. (2019, July 29). *Table 2: E-5 City/County Population and Housing Estimates 4/1/2010.* Retrieved from E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2019 with 2010 Census Benchmark: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/

California Department of Forestry & Fire Protection. (2019, July 12). *Fire and Resource Assessment Program.* Retrieved from Fire Hazard Severity Zones in SRA (adopted November 7, 2007): https://frap.fire.ca.gov/media/6198/fhszs_map10.pdf

CalRecycle. (2019, July 26). *SWIS Facility Detail.* Retrieved from Solid Waste Information System: https://www2.calrecycle.ca.gov/swfacilities/Directory/10-AA-0009/

Castac Basin Groundwater Sustainability Agency. (2019). *Welcome*. Retrieved from Castac Basin Groundwater Sustainability Agency: https://www.castacgsa.org/welcome

Cypher, B., Van Horn Job, C., Tennant, E., & Phillips, S. (2010). *Mammalian Species Surveys in the Aquisition Areas on Tejon Ranch, California*. Turlock, California: CSU Stanislaus, Endangered Species Recovery Program.

Dudek & USFWS. (2013). *Tehachapi Uplands Multiple Species Habitat Conservation Plan*. Lebec, California.

Harden, D. (1998). *California Geology*. Prentice Hall.

Kern County Planning and Natural Resources. (2015, June 30). *Mineral Resource Zones for Kern County*. Retrieved from Data Basin: https://databasin.org/datasets/26c92d3ecbe541ec81451f9de4e1e0e4

Kern County Planning Department. (2009). *Frazier Park Estates: Recirculated Draft Environmental Impact Report (SCH#2003111106)*. Kern County.

Kern County Public Works. (2019). *Seismic Hazard Atlas*. Retrieved from Kern County Public Works: https://kernpublicworks.com/maps/seismic-hazard-atlas/

Kern County. Code of Ordinances, Title 8 Health and Safety, Chapter 8.36 – Noise Control. (2020). *Kern County. Code of Ordinances, Title 8 Health and Safety, Chapter 8.36 – Noise Control*. Retrieved from Kern County. Code of Ordinances, Title 8 Health and Safety, Chapter 8.36 – Noise Control: https://library.municode.com/ca/kern_county/codes/code_of_ordinances?nodeId=TIT8HESA_CH8.36NOCO

Live Oak Associates. (2011). *Reconnaissance Surveys; Amphibian and Reptile Species; Tejon Ranch Conservancy Aquisiton Areas*. Live Oak Associates.

Provost & Pritchard Consulting Group. (September 22, 2019). *Air Quality and Greenhouse Gas Emissions Evaluation Report*.

San Joaquin Valley Air Pollution Control District. (2009). *Guidance for Valley Land-Use Agencies in Adddressing GHG Emission Impacts for New Projects Under CEQA*.

San Joaquin Valley Air Pollution Control District. (2015, March 19). *Air Quality Thresholds of Significance - Criteria Pollutants*. Retrieved from valleyair.org: http://www.valleyair.org/transportation/0714-GAMAQI-Criteria-Pollutant-Thresholds-of-Significance.pdf

San Joaquin Valley Air Pollution Control District. (2015). *Guidelines for Assessing and Mitigating /Air Quality Impacts*.

San Joaquin Valley Air Pollution Control District. 2015. Final Guidance for Assessing and Mitigating Air Quality Impacts. (2015). *San Joaquin Valley Air Pollution Control District. 2015. Final Guidance for Assessing and Mitigating Air Quality Impacts*. Retrieved from San Joaquin Valley Air Pollution Control District. 2015. Final Guidance for Assessing and Mitigating Air Quality Impacts.

Sandoval, T., Johnson, C., & Williams, D. (2019, December). *Blunt-nosed leopard lizard (Gambelia sila) Species Profile*. Retrieved from CSU Stanislaus, Endangered Species Recovery Program: https://esrp.csustan.edu/speciesprofiles/profile.php?sp=gasi

Shuford, W., & Gardali, T. (2008). *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. .* Camarillo and Sacramento, CA: Western Field Ornithologists and California Department of Fish and Game.

State of California. (2019). *State Responsibility Area Viewer*. Retrieved from Board of Forestry and Fire Protection: https://bofdata.fire.ca.gov/projects-and-programs/state-responsibility-area-viewer/

United States Department of Transportation. (2019, July 29). *Construction Noise Handbook*. Retrieved from Office of Planning, Environment, and Realty (HEP): https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm

United States Fish and Wildlife Service. (1998). *Draft Recovery Plan for the least Bell's vireo*. Portland, OR: USFWS.

United States Fish and Wildlife Service. (1998). *Draft Recovery Plan for the least Bell's vireo*. Portland, OR: USFWS.

Unites States Fish and Wildlife Service. (2010). *Coastal California Gnatcatcher (polioptila californica californica) 5-year Review: Summary and Evaluation*. Carlsbad, California: Unites States Fish and Wildlife Service.

Appendix A:

CalEEMod -Air Quality and Greenhouse Emissions Results

FMHS/Lebec CWD Water System Improvement Project

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.00	User Defined Unit	11.93	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	7			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Area = 11.93 acres of disturbance

Construction Phase - Construction adjusted in accordance with project anticipated timelines

Road Dust - 40% paved roads

Stationary Sources - Emergency Generators and Fire Pumps -

Vehicle Trips - Assumed 1 operational worker trip/day

Grading - Adjusted to reflect 11.93 acres graded

Stationary Sources - User Defined -

Operational Off-Road Equipment - Assuming the Project will add 1 truck trip per month to the District's operations

FMHS/Lebec CWD Water System Improvement Project - San Joaquin Valley Unified APCD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	130.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	30.00	79.00
tblConstructionPhase	NumDays	20.00	131.00
tblConstructionPhase	PhaseEndDate	5/10/2021	3/14/2023
tblConstructionPhase	PhaseEndDate	3/15/2021	8/1/2021
tblConstructionPhase	PhaseEndDate	11/25/2019	9/21/2009
tblConstructionPhase	PhaseEndDate	1/20/2020	1/31/2022
tblConstructionPhase	PhaseEndDate	4/12/2021	1/31/2023
tblConstructionPhase	PhaseEndDate	12/9/2019	9/14/2021
tblConstructionPhase	PhaseStartDate	4/13/2021	2/15/2023
tblConstructionPhase	PhaseStartDate	1/21/2020	1/31/2021
tblConstructionPhase	PhaseStartDate	10/29/2019	9/1/2021
tblConstructionPhase	PhaseStartDate	12/10/2019	10/13/2021
tblConstructionPhase	PhaseStartDate	3/16/2021	8/2/2022
tblConstructionPhase	PhaseStartDate	11/26/2019	9/1/2021
tblGrading	AcresOfGrading	197.50	11.93
tblLandUse	LotAcreage	0.00	11.93
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.38	0.38
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	100	40
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	240.00

tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	240.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	24.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	24.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	60.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	60.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	WD_TR	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2682	2.6837	2.1044	3.8200e-003	0.2796	0.1302	0.4098	0.1486	0.1210	0.2696	0.0000	332.4654	332.4654	0.0930	0.0000	334.7911
2022	0.1033	1.0176	1.1356	2.0100e-003	0.0823	0.0482	0.1305	0.0388	0.0443	0.0832	0.0000	176.9813	176.9813	0.0541	0.0000	178.3331
2023	0.0141	0.1256	0.1838	3.0000e-004	2.0500e-003	6.3300e-003	8.3800e-003	5.5000e-004	5.8800e-003	6.4300e-003	0.0000	26.2168	26.2168	7.3100e-003	0.0000	26.3996
Maximum	**0.2682**	**2.6837**	**2.1044**	**3.8200e-003**	**0.2796**	**0.1302**	**0.4098**	**0.1486**	**0.1210**	**0.2696**	**0.0000**	**332.4654**	**332.4654**	**0.0930**	**0.0000**	**334.7911**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2682	2.6837	2.1044	3.8200e-003	0.2796	0.1302	0.4098	0.1486	0.1210	0.2696	0.0000	332.4650	332.4650	0.0930	0.0000	334.7907
2022	0.1033	1.0176	1.1356	2.0100e-003	0.0823	0.0482	0.1305	0.0388	0.0443	0.0832	0.0000	176.9811	176.9811	0.0541	0.0000	178.3329
2023	0.0141	0.1256	0.1838	3.0000e-004	2.0500e-003	6.3300e-003	8.3800e-003	5.5000e-004	5.8800e-003	6.4300e-003	0.0000	26.2168	26.2168	7.3100e-003	0.0000	26.3996
Maximum	**0.2682**	**2.6837**	**2.1044**	**3.8200e-003**	**0.2796**	**0.1302**	**0.4098**	**0.1486**	**0.1210**	**0.2696**	**0.0000**	**332.4650**	**332.4650**	**0.0930**	**0.0000**	**334.7907**

FMHS/Lebec CWD Water System Improvement Project - San Joaquin Valley Unified APCD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
6	**1-29-2021**	**4-28-2021**	0.6076	0.6076
7	**4-29-2021**	**7-28-2021**	0.6283	0.6283
8	**7-29-2021**	**10-28-2021**	0.5406	0.5406
9	**10-29-2021**	**1-28-2022**	1.5875	1.5875
10	**1-29-2022**	**4-28-2022**	0.0457	0.0457
12	**7-29-2022**	**10-28-2022**	0.3885	0.3885
13	**10-29-2022**	**1-28-2023**	0.3962	0.3962
14	**1-29-2023**	**4-28-2023**	0.0271	0.0271
		Highest	1.5875	1.5875

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Offroad	3.0400e-003	0.0215	0.0198	8.0000e-005		7.8000e-004	7.8000e-004		7.2000e-004	7.2000e-004	0.0000	7.0014	7.0014	2.2600e-003	0.0000	7.0580
Stationary	0.0752	0.0391	0.1951	8.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003	0.0000	9.1550	9.1550	8.4500e-003	0.0000	9.3662
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0782**	**0.0606**	**0.2149**	**1.6000e-004**	**0.0000**	**2.8700e-003**	**2.8700e-003**	**0.0000**	**2.8100e-003**	**2.8100e-003**	**0.0000**	**16.1564**	**16.1564**	**0.0107**	**0.0000**	**16.4242**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Offroad	3.0400e-003	0.0215	0.0198	8.0000e-005		7.8000e-004	7.8000e-004		7.2000e-004	7.2000e-004	0.0000	7.0014	7.0014	2.2600e-003	0.0000	7.0580
Stationary	0.0752	0.0391	0.1951	8.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003	0.0000	9.1550	9.1550	8.4500e-003	0.0000	9.3662
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0782**	**0.0606**	**0.2149**	**1.6000e-004**	**0.0000**	**2.8700e-003**	**2.8700e-003**	**0.0000**	**2.8100e-003**	**2.8100e-003**	**0.0000**	**16.1564**	**16.1564**	**0.0107**	**0.0000**	**16.4242**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/31/2021	8/1/2021	5	130	
2	Demolition	Demolition	9/1/2021	9/21/2009	5	0	
3	Site Preparation	Site Preparation	9/1/2021	9/14/2021	5	10	
4	Grading	Grading	10/13/2021	1/31/2022	5	79	
5	Paving	Paving	8/2/2022	1/31/2023	5	131	
6	Architectural Coating	Architectural Coating	2/15/2023	3/14/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 11.93

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

FMHS/Lebec CWD Water System Improvement Project - San Joaquin Valley Unified APCD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1236	1.1331	1.0774	1.7500e-003		0.0623	0.0623		0.0586	0.0586	0.0000	150.5642	150.5642	0.0363	0.0000	151.4723
Total	**0.1236**	**1.1331**	**1.0774**	**1.7500e-003**		**0.0623**	**0.0623**		**0.0586**	**0.0586**	**0.0000**	**150.5642**	**150.5642**	**0.0363**	**0.0000**	**151.4723**

3.2 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1236	1.1331	1.0774	1.7500e-003		0.0623	0.0623		0.0586	0.0586	0.0000	150.5641	150.5641	0.0363	0.0000	151.4722
Total	**0.1236**	**1.1331**	**1.0774**	**1.7500e-003**		**0.0623**	**0.0623**		**0.0586**	**0.0586**	**0.0000**	**150.5641**	**150.5641**	**0.0363**	**0.0000**	**151.4722**

3.2 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0903**	**0.0102**	**0.1006**	**0.0497**	**9.4000e-003**	**0.0591**	**0.0000**	**16.7179**	**16.7179**	**5.4100e-003**	**0.0000**	**16.8530**

3.4 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.4000e-004	3.4600e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.9602	0.9602	2.0000e-005	0.0000	0.9608
Total	**4.9000e-004**	**3.4000e-004**	**3.4600e-003**	**1.0000e-005**	**1.1200e-003**	**1.0000e-005**	**1.1300e-003**	**3.0000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.9602**	**0.9602**	**2.0000e-005**	**0.0000**	**0.9608**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0903**	**0.0102**	**0.1006**	**0.0497**	**9.4000e-003**	**0.0591**	**0.0000**	**16.7178**	**16.7178**	**5.4100e-003**	**0.0000**	**16.8530**

3.4 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.4000e-004	3.4600e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.9602	0.9602	2.0000e-005	0.0000	0.9608
Total	**4.9000e-004**	**3.4000e-004**	**3.4600e-003**	**1.0000e-005**	**1.1200e-003**	**1.0000e-005**	**1.1300e-003**	**3.0000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.9602**	**0.9602**	**2.0000e-005**	**0.0000**	**0.9608**

3.5 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1810	0.0000	0.1810	0.0967	0.0000	0.0967	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1215	1.3456	0.8955	1.8000e-003		0.0576	0.0576		0.0530	0.0530	0.0000	158.0355	158.0355	0.0511	0.0000	159.3132
Total	**0.1215**	**1.3456**	**0.8955**	**1.8000e-003**	**0.1810**	**0.0576**	**0.2385**	**0.0967**	**0.0530**	**0.1497**	**0.0000**	**158.0355**	**158.0355**	**0.0511**	**0.0000**	**159.3132**

3.5 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1500e-003	2.2000e-003	0.0223	7.0000e-005	7.2100e-003	5.0000e-005	7.2600e-003	1.9200e-003	4.0000e-005	1.9600e-003	0.0000	6.1877	6.1877	1.6000e-004	0.0000	6.1917
Total	**3.1500e-003**	**2.2000e-003**	**0.0223**	**7.0000e-005**	**7.2100e-003**	**5.0000e-005**	**7.2600e-003**	**1.9200e-003**	**4.0000e-005**	**1.9600e-003**	**0.0000**	**6.1877**	**6.1877**	**1.6000e-004**	**0.0000**	**6.1917**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1810	0.0000	0.1810	0.0967	0.0000	0.0967	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1215	1.3456	0.8955	1.8000e-003		0.0576	0.0576		0.0530	0.0530	0.0000	158.0353	158.0353	0.0511	0.0000	159.3131
Total	**0.1215**	**1.3456**	**0.8955**	**1.8000e-003**	**0.1810**	**0.0576**	**0.2385**	**0.0967**	**0.0530**	**0.1497**	**0.0000**	**158.0353**	**158.0353**	**0.0511**	**0.0000**	**159.3131**

3.5 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1500e-003	2.2000e-003	0.0223	7.0000e-005	7.2100e-003	5.0000e-005	7.2600e-003	1.9200e-003	4.0000e-005	1.9600e-003	0.0000	6.1877	6.1877	1.6000e-004	0.0000	6.1917
Total	**3.1500e-003**	**2.2000e-003**	**0.0223**	**7.0000e-005**	**7.2100e-003**	**5.0000e-005**	**7.2600e-003**	**1.9200e-003**	**4.0000e-005**	**1.9600e-003**	**0.0000**	**6.1877**	**6.1877**	**1.6000e-004**	**0.0000**	**6.1917**

3.5 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0696	0.0000	0.0696	0.0354	0.0000	0.0354	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0381	0.4079	0.3049	6.5000e-004		0.0172	0.0172		0.0158	0.0158	0.0000	57.2613	57.2613	0.0185	0.0000	57.7243
Total	**0.0381**	**0.4079**	**0.3049**	**6.5000e-004**	**0.0696**	**0.0172**	**0.0867**	**0.0354**	**0.0158**	**0.0512**	**0.0000**	**57.2613**	**57.2613**	**0.0185**	**0.0000**	**57.7243**

3.5 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	7.1000e-004	7.3600e-003	2.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.1603	2.1603	5.0000e-005	0.0000	2.1615
Total	**1.0600e-003**	**7.1000e-004**	**7.3600e-003**	**2.0000e-005**	**2.6100e-003**	**2.0000e-005**	**2.6300e-003**	**6.9000e-004**	**2.0000e-005**	**7.1000e-004**	**0.0000**	**2.1603**	**2.1603**	**5.0000e-005**	**0.0000**	**2.1615**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0696	0.0000	0.0696	0.0354	0.0000	0.0354	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0381	0.4079	0.3049	6.5000e-004		0.0172	0.0172		0.0158	0.0158	0.0000	57.2613	57.2613	0.0185	0.0000	57.7243
Total	**0.0381**	**0.4079**	**0.3049**	**6.5000e-004**	**0.0696**	**0.0172**	**0.0867**	**0.0354**	**0.0158**	**0.0512**	**0.0000**	**57.2613**	**57.2613**	**0.0185**	**0.0000**	**57.7243**

3.5 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	7.1000e-004	7.3600e-003	2.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.1603	2.1603	5.0000e-005	0.0000	2.1615
Total	**1.0600e-003**	**7.1000e-004**	**7.3600e-003**	**2.0000e-005**	**2.6100e-003**	**2.0000e-005**	**2.6300e-003**	**6.9000e-004**	**2.0000e-005**	**7.1000e-004**	**0.0000**	**2.1603**	**2.1603**	**5.0000e-005**	**0.0000**	**2.1615**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0601	0.6063	0.7946	1.2400e-003		0.0310	0.0310		0.0285	0.0285	0.0000	109.1502	109.1502	0.0353	0.0000	110.0327
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0601**	**0.6063**	**0.7946**	**1.2400e-003**		**0.0310**	**0.0310**		**0.0285**	**0.0285**	**0.0000**	**109.1502**	**109.1502**	**0.0353**	**0.0000**	**110.0327**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1200e-003	2.7600e-003	0.0286	9.0000e-005	0.0102	6.0000e-005	0.0102	2.7000e-003	6.0000e-005	2.7600e-003	0.0000	8.4095	8.4095	2.0000e-004	0.0000	8.4145
Total	**4.1200e-003**	**2.7600e-003**	**0.0286**	**9.0000e-005**	**0.0102**	**6.0000e-005**	**0.0102**	**2.7000e-003**	**6.0000e-005**	**2.7600e-003**	**0.0000**	**8.4095**	**8.4095**	**2.0000e-004**	**0.0000**	**8.4145**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0601	0.6063	0.7946	1.2400e-003		0.0310	0.0310		0.0285	0.0285	0.0000	109.1501	109.1501	0.0353	0.0000	110.0326
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0601**	**0.6063**	**0.7946**	**1.2400e-003**		**0.0310**	**0.0310**		**0.0285**	**0.0285**	**0.0000**	**109.1501**	**109.1501**	**0.0353**	**0.0000**	**110.0326**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1200e-003	2.7600e-003	0.0286	9.0000e-005	0.0102	6.0000e-005	0.0102	2.7000e-003	6.0000e-005	2.7600e-003	0.0000	8.4095	8.4095	2.0000e-004	0.0000	8.4145
Total	**4.1200e-003**	**2.7600e-003**	**0.0286**	**9.0000e-005**	**0.0102**	**6.0000e-005**	**0.0102**	**2.7000e-003**	**6.0000e-005**	**2.7600e-003**	**0.0000**	**8.4095**	**8.4095**	**2.0000e-004**	**0.0000**	**8.4145**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0114	0.1121	0.1604	2.5000e-004		5.6100e-003	5.6100e-003		5.1600e-003	5.1600e-003	0.0000	22.0296	22.0296	7.1200e-003	0.0000	22.2077
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0114**	**0.1121**	**0.1604**	**2.5000e-004**		**5.6100e-003**	**5.6100e-003**		**5.1600e-003**	**5.1600e-003**	**0.0000**	**22.0296**	**22.0296**	**7.1200e-003**	**0.0000**	**22.2077**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	5.0000e-004	5.2700e-003	2.0000e-005	2.0500e-003	1.0000e-005	2.0600e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.6340	1.6340	4.0000e-005	0.0000	1.6349
Total	**7.7000e-004**	**5.0000e-004**	**5.2700e-003**	**2.0000e-005**	**2.0500e-003**	**1.0000e-005**	**2.0600e-003**	**5.5000e-004**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**1.6340**	**1.6340**	**4.0000e-005**	**0.0000**	**1.6349**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0114	0.1121	0.1604	2.5000e-004		5.6100e-003	5.6100e-003		5.1600e-003	5.1600e-003	0.0000	22.0295	22.0295	7.1200e-003	0.0000	22.2077
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0114**	**0.1121**	**0.1604**	**2.5000e-004**		**5.6100e-003**	**5.6100e-003**		**5.1600e-003**	**5.1600e-003**	**0.0000**	**22.0295**	**22.0295**	**7.1200e-003**	**0.0000**	**22.2077**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	5.0000e-004	5.2700e-003	2.0000e-005	2.0500e-003	1.0000e-005	2.0600e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.6340	1.6340	4.0000e-005	0.0000	1.6349
Total	**7.7000e-004**	**5.0000e-004**	**5.2700e-003**	**2.0000e-005**	**2.0500e-003**	**1.0000e-005**	**2.0600e-003**	**5.5000e-004**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**1.6340**	**1.6340**	**4.0000e-005**	**0.0000**	**1.6349**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**1.9200e-003**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**1.9200e-003**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Off-Highway Trucks	1	8.00	12	402	0.38	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Off-Highway Trucks	3.0400e-003	0.0215	0.0198	8.0000e-005		7.8000e-004	7.8000e-004		7.2000e-004	7.2000e-004	0.0000	7.0014	7.0014	2.2600e-003	0.0000	7.0580
Total	**3.0400e-003**	**0.0215**	**0.0198**	**8.0000e-005**		**7.8000e-004**	**7.8000e-004**		**7.2000e-004**	**7.2000e-004**	**0.0000**	**7.0014**	**7.0014**	**2.2600e-003**	**0.0000**	**7.0580**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	24	60	240	0.73	CNG
Fire Pump	1	24	60	240	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number
Booster Pump	1

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Booster Pump	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Emergency Generator - CNG (0 - 500 HP)	0.0634	6.1000e-003	0.1650	2.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	3.6716	3.6716	7.6800e-003	0.0000	3.8635
Fire Pump - Diesel (175 - 300 HP)	0.0118	0.0330	0.0301	6.0000e-005		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	5.4835	5.4835	7.7000e-004	0.0000	5.5027
Total	**0.0752**	**0.0391**	**0.1951**	**8.0000e-005**		**2.0900e-003**	**2.0900e-003**		**2.0900e-003**	**2.0900e-003**	**0.0000**	**9.1550**	**9.1550**	**8.4500e-003**	**0.0000**	**9.3662**

11.0 Vegetation

Appendix B:

Biological Resources Report

Lebec County Water District/ Frazier Mountain High School Water Improvement Project

Biological Evaluation



Prepared by:
Updated by Dena Giacomini, Senior Planner/Biologist
Brooke Fletcher, Biologist
Mary Beth Bourne, Biologist

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

August 2020

Table of Contents

1 Introduction 1-1
1.1 Project Description 1-1
1.2 Report Objectives 1-2
1.3 Study Methodology 1-2
2 Existing Conditions 2-1
2.1 Regional Setting 2-1
2.2 Project Site 2-1
2.3 Biological Communities 2-3
2.3.1 Sagebrush Shrubland 2-3
2.3.2 Annual Grassland 2-4
2.3.3 Ruderal 2-4
2.3.4 Developed 2-5
2.3.5 Ephemeral Drainage 2-5
2.3.6 Intermittent Stream 2-6
2.4 Soils 2-6
2.5 Natural Communities of Special Concern 2-7
2.6 Designated Critical Habitat 2-7
2.7 Wildlife Movement Corridors 2-7
2.8 Special Status Plants and Animals 2-7
3 Impacts and Mitigation 3-7
3.1 Significance Criteria 3-7
3.1.1 CEQA 3-7
3.1.2 NEPA 3-8
3.2 Relevant Goals, Policies, and Laws 3-8
3.2.1 Kern County General Plan 3-8
3.2.2 Los Angeles County General Plan 2035 3-9
3.2.3 Antelope Valley Area Plan 3-10
3.2.4 Los Angeles County Oak Woodlands Conservation Management Plan Guide 3-10
3.2.5 Los Angeles County Oak Tree Ordinance 3-10
3.2.6 Frazier Park/Lebec Specific Plan 3-11
3.2.7 Tejon Mountain Village Specific and Community Plan 3-11
3.2.8 Tehachapi Upland Multiple Species Habitat Conservation Plan 3-11
3.2.9 Tejon Ranch Conservancy's Ranch-Wide Agreement and Ranch-Wide Management Plan 3-20
3.2.10 California State Parks General Provisions 3-22
3.2.11 Threatened and Endangered Species 3-22

3.2.12 Designated Critical Habitat 3-22
3.2.13 Migratory Birds 3-22
3.2.14 Birds of Prey 3-22
3.2.15 Nesting Birds 3-23
3.2.16 Oak Woodlands 3-23
3.2.17 Wetlands and other "Jurisdictional Waters" 3-23
3.3 Potentially Significant Project-Related Impacts, Recommendations, and Mitigation 3-25
3.3.1 Compliance with Local Policies and Habitat Conservation Plans 3-25
3.3.2 Project-Related Impacts to Jurisdictional Waters, Water Quality, Wetlands, Navigable Waters, Wild and Scenic Rivers, or other Aquatic Features, and Riparian Habitat 3-25
3.3.3 Project-Related Impacts to Special Status Plants and/or Sensitive Natural Communities Present or with Potential to Occur Onsite 3-26
3.3.4 Project-Related Impacts to Oak Trees and/or Oak Woodlands 3-29
3.3.5 Project-Related Impacts to Special Status Animal Species Present or with Potential to Occur Onsite 3-30
3.3.6 Project-Related Impacts to Roosting Bats and Special Status Bats 3-41
3.3.7 Project-Related Impacts to Wildlife Movement Corridors and Native Nursery Sites 3-42
3.4 Less Than Significant Project-Related Impacts 3-43
3.4.1 Project-Related Impacts to Special Status Plant Species Absent from or Unlikely to Occur Onsite 3-43
3.4.2 Project-Related Impacts to Special Status Animal Species Absent From, or Unlikely to Occur Onsite 3-44
3.4.3 Project-Related Impacts to Critical Habitat 3-44
3.4.4 Coastal Zone and Coastal Barriers Resources Act 3-44
3.4.5 Project-Related Impact to Essential Fish Habitat 3-44
3.5 Section 7 Determination 3-44
4 References 4-1

APPENDICES

Appendix A. Selected Photographs of the Project Site A-1
Appendix B. CNDDB Query Results B-1
Appendix C. USFWS Species List C-1
Appendix D. NOAA EFH Mapping Query Results D-1
Appendix E. Soils Report E-1

LIST OF FIGURES

Figure 1. Regional Location Map 1-4
Figure 2. Topographic Quadrangle Map 1-5
Figure 3. Area of Potential Effect (APE) and Waterways Map 1-6
Figure 4. Detail of New Pipeline to Lebec Well 04 & Lebec/State Interconnection Pipeline 1-7
Figure 5. Detail of Frazier Mountain Road Pipeline 1-8
Figure 6. Local Plan Map 1-9
Figure 7. Protected Lands Map 1-10

LIST OF TABLES

Table 1. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity 2-9
Table 2. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity 2-1
Table 3. Section 7 Determinations 3-45

1 Introduction

Lebec County Water District (LCWD) operates a water system that serves the unincorporated community of Lebec, California near the intersection of Interstate 5 (I-5) and Frazier Mountain Park Road in southern Kern County. Frazier Mountain High School (FMHS), located just over one mile south of Lebec, operates an onsite well that provides all of its current water supply. Currently the FMHS obtains its water supply from a single primary well (Well 01) that was drilled in 1992. The well currently violates the Safe Drinking Water Maximum Contaminant Level (MCL) for fluoride and uranium. Because the fluoride and uranium levels exceed the MCL at the school well site, the El Tejon Unified School District (District) and owner of the FMHS water system, has received compliance orders from the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW). Lebec County Water District plans on annexing the territory of the FMHS to incorporate and construct and operate the necessary infrastructure and new water system and tanks that would improve water quality, enhance water supply reliability, expand water storage, replace FMHS drinking water supply and allow for the existing water to be used for irrigation and fire suppression.

The following technical report is prepared in compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). This report includes a description of the biological resources present or with potential to occur within the Project area and surrounding lands in addition to evaluating potential Project-related impacts to said resources.

1.1 Project Description

The Project involves the construction and operation of water system improvements by LCWD that will allow it to consolidate with the FMHS water system while continuing to provide reliable and clean drinking water to existing customers. The consolidation includes the annexation of the territory of FMHS into the LCWD as well as the water system improvements necessary to replace the FMHS drinking water supply through extension of services to FMHS, including construction of associated infrastructure. The Project involves several components of water system improvements as illustrated in **Figure 3**. The improvements would increase water storage capacity, improve water quality, and improve system reliability within the District and create an interconnection with LCWD to replace drinking water at FMHS.

The Project is generally located in the unincorporated community of Lebec in southern Kern County both east and west of I-5, although a portion of the proposed pipeline alignment adjacent to Frazier Mountain Park Road runs through northern Los Angeles County. The Project will require grading and excavating at the tank and well sites, as well as along the pipeline routes; where pipelines are proposed to cross wetland features, jack and bore construction would be used. The total combined area of disturbance would encompass approximately 11.8 acres, which includes the buffers allowed for the construction of pipelines along proposed alignments, involving the following components:

1) LCWD Well 04 Site. Drill a new well at a depth of approximately 300 feet below ground surface (bgs). Approximately 0.2 acres of disturbance.

2) Water pipeline from Well 04 Site to Distribution System. construction of approximately 0.4 miles of 8-inch diameter pipeline, including a jack and bore of a 24-inch diameter steel casing with 10-inch carrier pipeline under I-5. Approximately 1.25 acres of disturbance.

3) Pressure zone interconnection pipeline on the western side of I-5. construction of approximately 0.33 linear miles of pressure zone interconnection pipeline. Approximately 1.0 acre of disturbance.

4) Pipeline Along Frazier Mountain Road between Lebec Road and Cuddy Canyon Road. install approximately 1.3 linear miles of pipeline along Frazier Mountain Road between Wainright Court and Cuddy Canyon Road to move water from the Well 04 to the Chimney Canyon storage tanks. A booster

pump station will be installed at the FMHS Well Site that will boost the pressure to the Chimney Canyon Pressure Zone. Approximately 3.64 acres of disturbance.

5) Chimney Canyon Tank Site. installation of new 200,000-gallon water storage tank. The Chimney Canyon Tank site has six (6) existing tanks. The new tank will bring the total number to seven (7). Approximately 0.1 acres of disturbance.

6) FMHS Water System Improvements. construct approximately 1.8 linear miles of new 4-inch diameter drinking water pipeline, add a new 25-gallon per minute (gpm) booster pump station, and add a new 40,000-gallon irrigation water storage tank at FMHS. FMHS's existing water well will be designated for for irrigation and watering of the ball fields. The new proposed 120,000-gallon water storage tank at FMHS will be designated for drinking water and fire protection purposes (with no cross connections between the irrigation and drinking water systems). Approximately 5.2 acres of disturbance located adjacent to the existing tank.

Construction is estimated be conducted over an approximate 18-month period of disturbance. It is estimated that construction will begin in the Fall of 2022 and end in the Spring 2024. Construction equipment would include, but may not be limited to, the use of auger trucks, horizontal directional drilling and boring equipment, cranes, backhoes, excavators, compactors, scrapers, rollers, and lift trucks. Road paving may utilize earthmoving equipment, dozers, excavators and trucks, motor graders, cold planers, vibratory soil compactors, asphalt pavers, and compactors.

1.2 Report Objectives

This report addresses the following:

1) The presence of sensitive biological resources onsite, or with the potential to occur onsite.
2) The federal, State, and local regulations regarding these resources.
3) Mitigation measures that may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of State and federal resource agencies.

Construction activities such as ground disturbance associated with the installation of water system improvements and pipelines could potentially damage biological resources or modify habitats that are crucial for sensitive plant and wildlife species. In cases such as these, development may be regulated by State or federal agencies, subject to provisions of CEQA, and/or NEPA, and/or addressed by local regulatory agencies.

Therefore, the purpose of this report is to:

1) Summarize all site-specific information related to existing biological resources.
2) Make reasonable inferences about the biological resources that could occur onsite based on habitat suitability and the proximity of the site to a species' known range.
3) Summarize federal, State and regional and local natural resource protection laws, policies and regulations that may be relevant to the Project.
4) Identify and discuss Project impacts to biological resources likely to occur onsite within the context of CEQA, or State, or federal laws.
5) Identify avoidance and/or mitigation measures that would prevent or reduce impacts to biological resources consistent with recommendations of the resource agencies for affected biological resources.

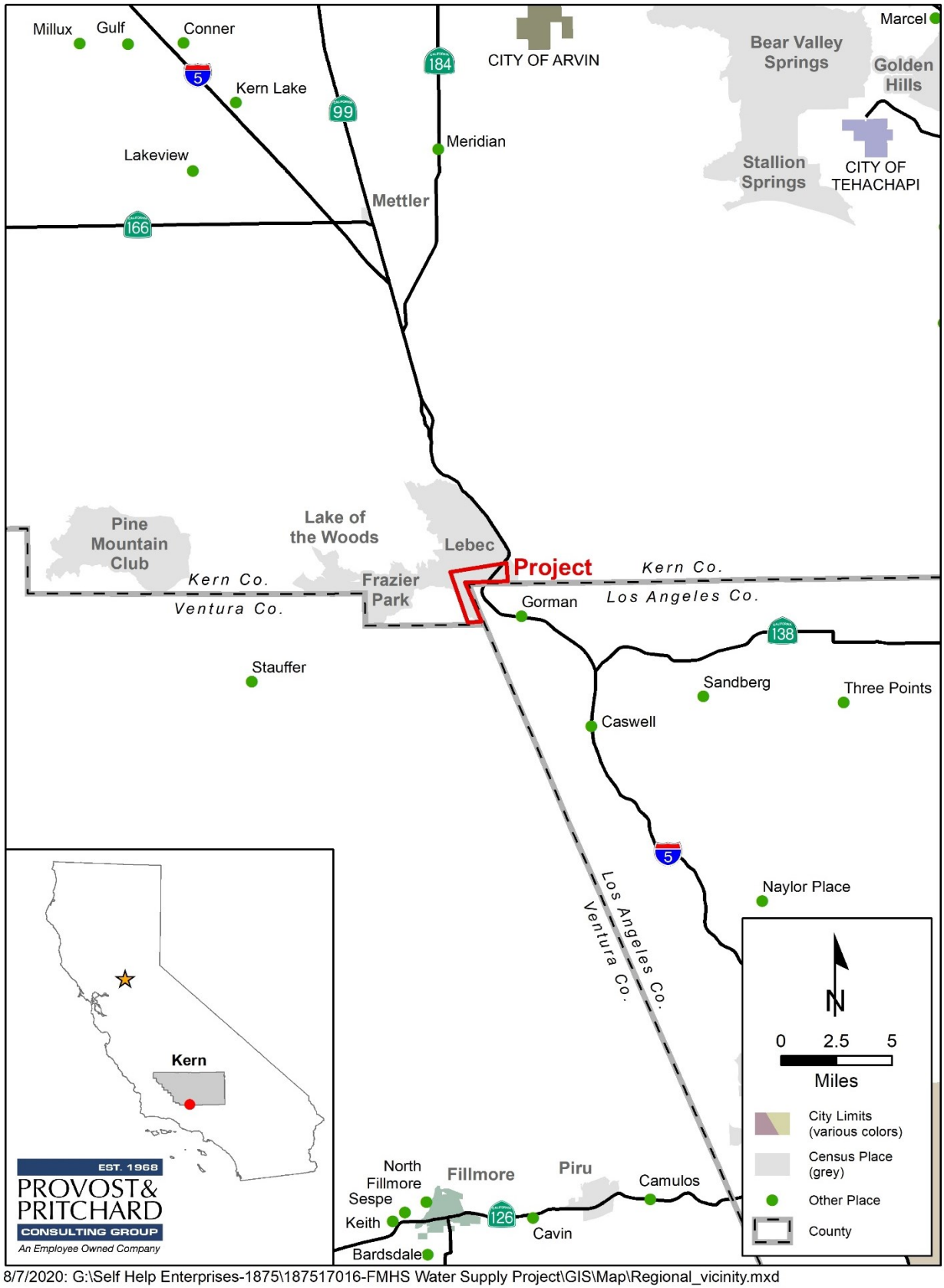
1.3 Study Methodology

A reconnaissance-level field survey of the Project site and surrounding area was conducted on November 14, 2019 by Provost & Pritchard biologists Brooke Fletcher and Mary Beth Bourne. An additional reconnaissance-level field survey was performed again on August 3, 2020, by Dena Giacomini. The survey consisted of walking

and driving through accessible Project areas while identifying and noting land uses, biological habitats and communities, and plant and animal species encountered. Furthermore, the site and surrounding areas were assessed for suitable habitats of various wildlife species. Access was granted by the necessary landowners prior to the field survey and an access permit was required and granted by Tejon Ranch on November 14, 2019 and August 3, 2020 for access on Tejon Ranch lands.

An analysis of potential Project-related impacts to biological resources was conducted based on the resources known to exist or with the potential to exist within the Project site and surrounding areas. Sources of information used in preparation of this analysis included: the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB); the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system; the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants of California; CalFlora's online database of California native plants; the Jepson Herbarium online database (Jepson eFlora); USFWS Environmental Conservation Online System (ECOS); the NatureServe Explorer online database; the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Plants Database; the CDFW California Wildlife Habitat Relationships (CWHR) database; the California Herps online database; and various manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

The field investigation did not include an aquatic resources delineation or focused surveys for special status species. The field survey conducted included an appropriate level of detail to assess the significance of potential impacts to sensitive biological resources resulting from the Project. Furthermore, the field survey was sufficient to generally describe those features of the Project that could be subject to the jurisdiction of federal and/or State agencies, such as the United States Army Corps of Engineers (USACE), CDFW, and the Regional Water Quality Control Board (RWQCB).



8/7/2020: G:\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\Regional_vicinity.mxd

Figure 1. Regional Location Map

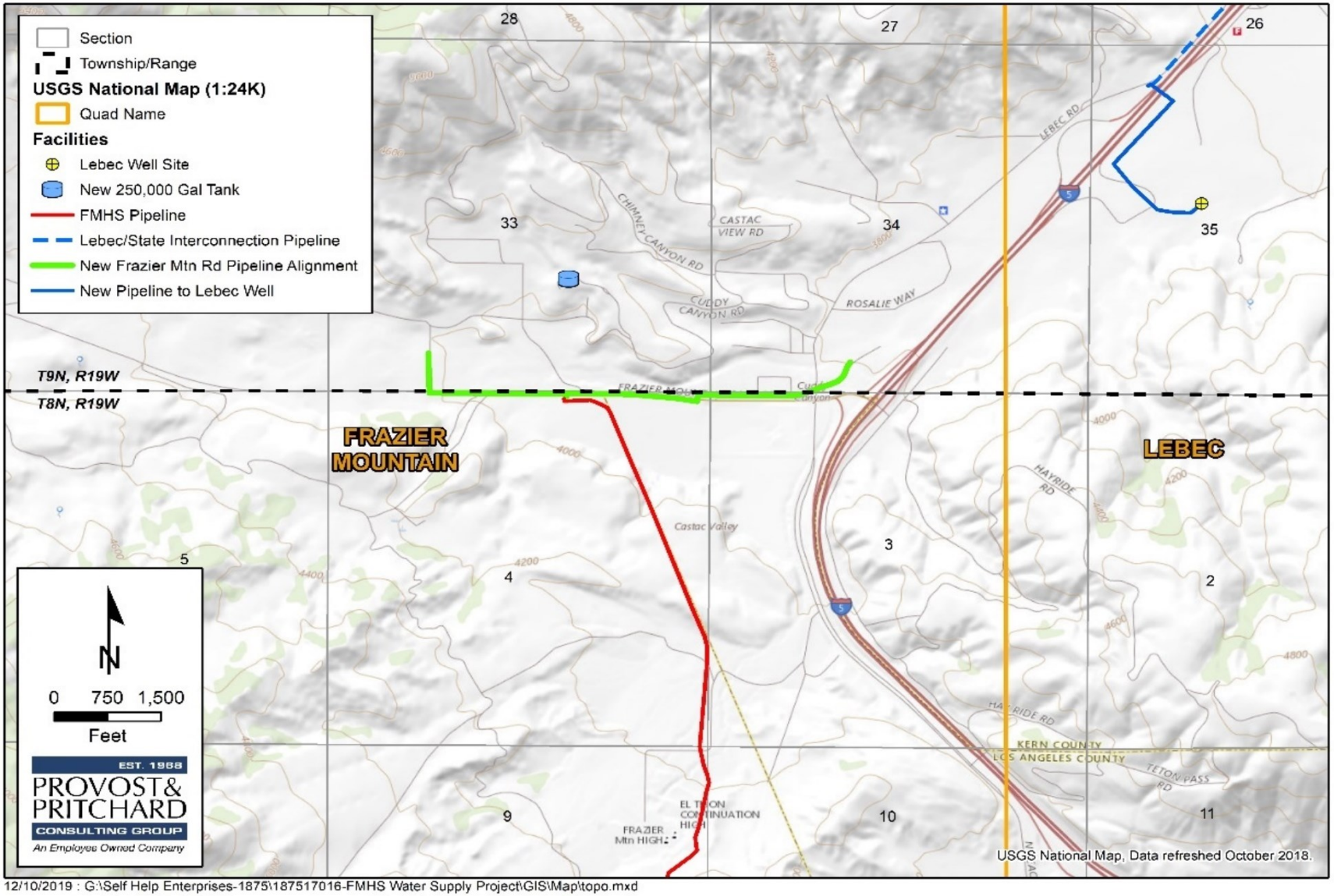


Figure 2. Topographic Quadrangle Map



8/7/2020 : G:\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\BioMaps\Waterways.mxd

Figure 3. Area of Potential Effect (APE) and Waterways Map



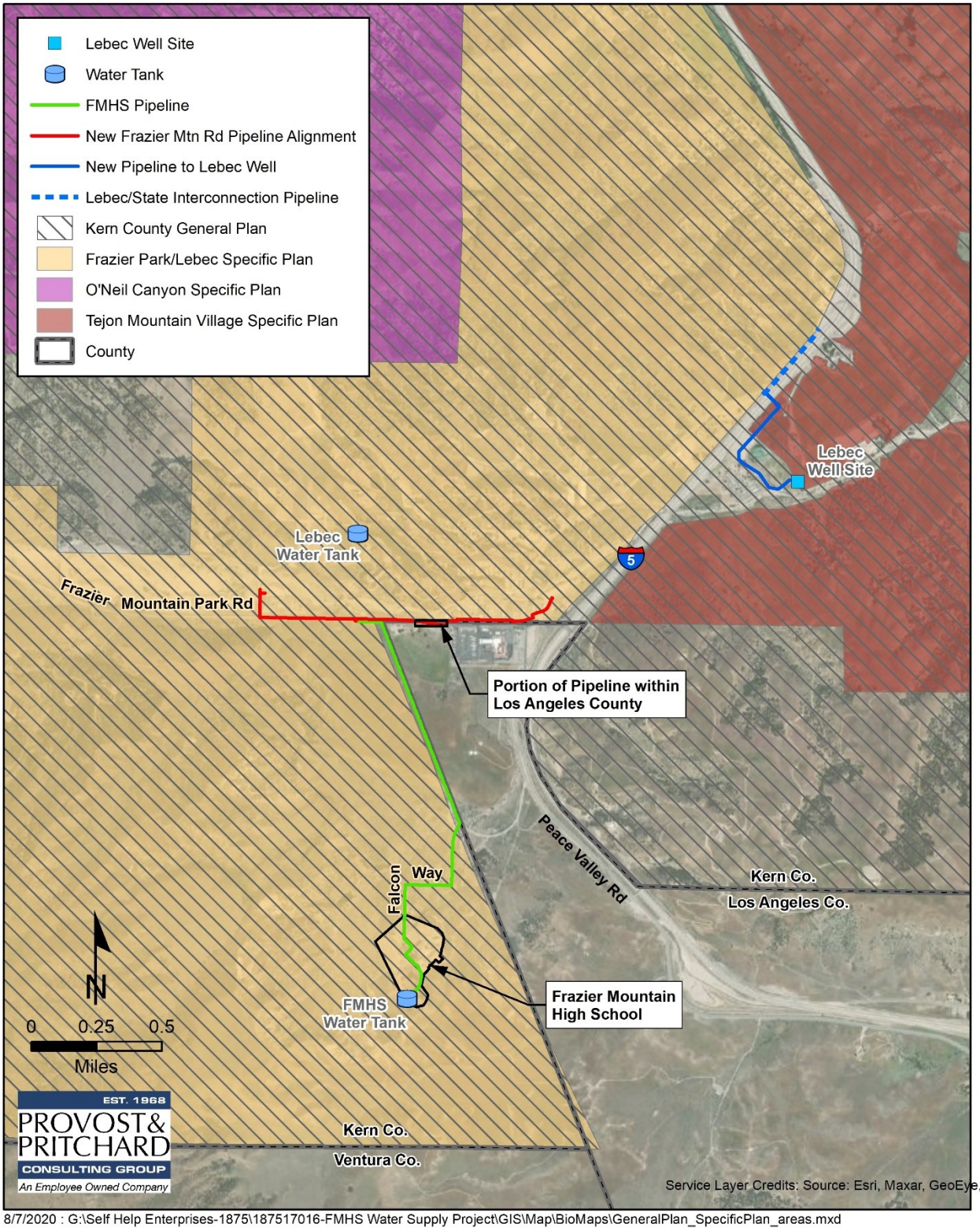
8/7/2020 : G:\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\BioMaps\Habitat_well_site.mxd

Figure 4. Detail of New Pipeline to Lebec Well 04 & Lebec/State Interconnection Pipeline



8/7/2020 : G:\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\BioMaps\Habitat_FrazierMtnRd_new_pipeline alignment.mxd

Figure 5. Detail of Frazier Mountain Road Pipeline



8/7/2020 : G:\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\BioMaps\GeneralPlan_SpecificPlan_areas.mxd

Figure 6. Local Plan Map

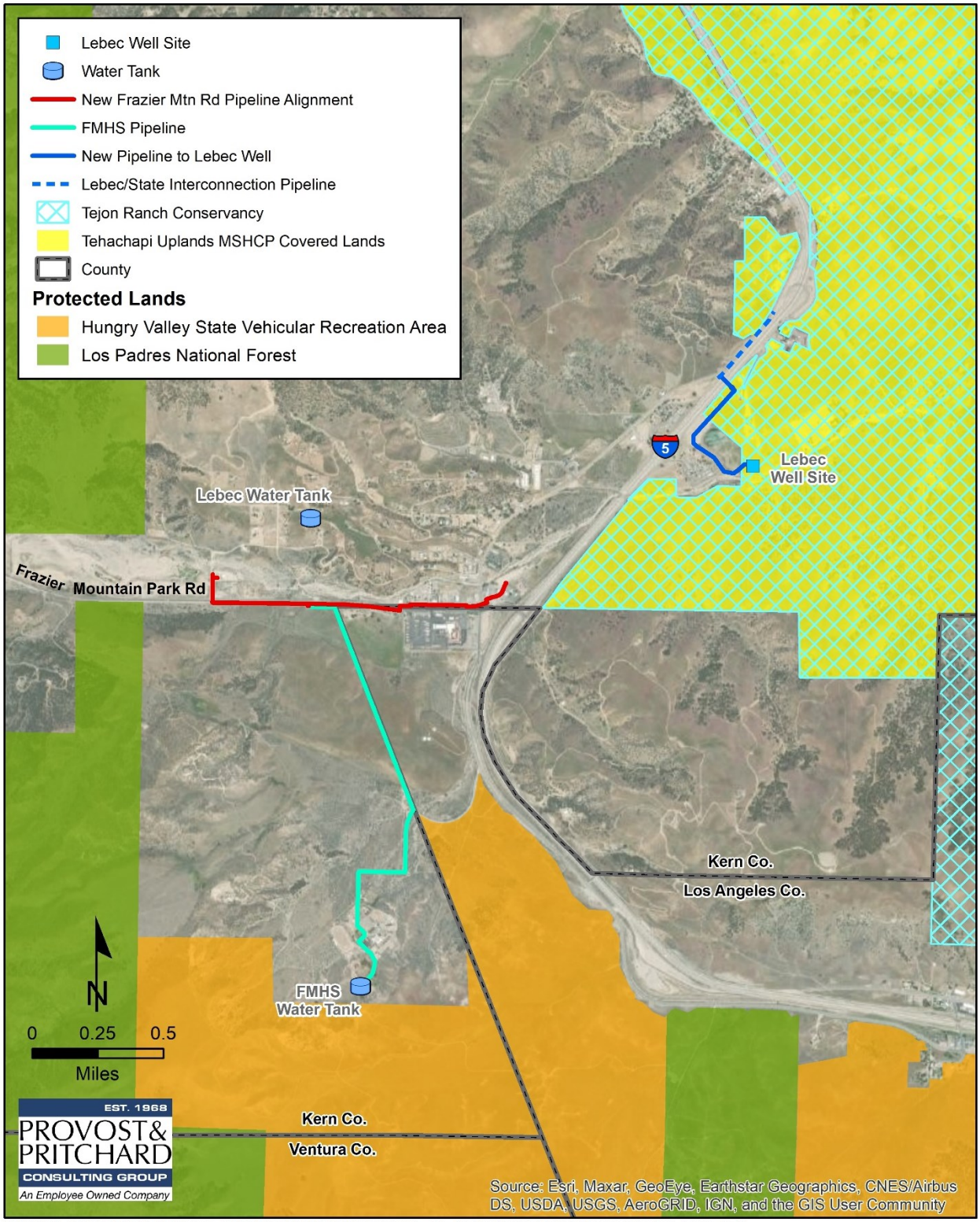


Figure 7. Protected Lands Map

2 Existing Conditions

2.1 Regional Setting

The Project site is located in Kern County within the unincorporated community of Lebec, a small mountain community in the Tejon Pass, which links Southern California to the San Joaquin Valley (**See Figure 1**). The Tejon Pass is a mountain pass between the southwest end of the Tehachapi Mountains and northeastern San Emigdio Mountains.

The Tejon Pass area experiences warm, dry summers followed by cool, moist winters with occasional snowfall. Summer temperatures occasionally reach above 90 degrees Fahrenheit, and the humidity is generally low. Winter temperatures are often below 50 degrees Fahrenheit during the day and rarely exceed 60 degrees. On average, the Tejon Pass area receives approximately 12 inches of precipitation in the form of rainfall yearly, and approximately five inches of snowfall yearly, most of which occurs between October and April.

The Tejon Pass and the greater Tehachapi area are home to a variety of protected State and federal lands, as well as other important habitat areas. The Los Padres National Forest, which is approximately 2,970 square miles, borders the west side of I-5 through much of the Tejon Pass. The Angeles National Forest borders the east side of I-5- in the area south of the City of Gorman and north of Castaic Lake. Fort Tejon State Historic Park is north of Lebec on the west side of I-5, while the State lands are south of Frazier Mountain Park Road. East of Lebec and I-5 is the Tejon Ranch, which is home to more than 60 at-risk plant and animal species. The Tejon Ranch is within the Tehachapi Upland Multiple Species Habitat Conservation Plan (TUMSHCP). Combined, these parks and preservation areas comprise millions of acres of contiguous habitat for numerous rare and endangered species.

The Project lies within the Cuddy Canyon Valley Groundwater Basin and the Castac Lake Valley Groundwater Basin in the southernmost portion of the Tulare Lake hydrologic region (DWR, 2020). The Cuddy Canyon Valley is at the eastern end of a series of intermountain valleys formed along the San Andreas Fault in the San Emigdio Mountains of southern Kern County. Cuddy Creek drains the basin eastward into Castac Lake Valley (DWR, 2003). Castac Lake Valley is a "Y" shaped basin with northeast and southwest arms developed along the Garlock Fault and a northwest arm developed along Grapevine Creek. The three arms intersect to form Castac Valley, which contains Castac Lake. The basin is internally drained; however, during rare flooding events, Castac Lake can spill into Grapevine Creek which empties northward into the San Joaquin Valley (DWR, 2003).

The Project is located within the Castac Lake watershed; Hydrologic Unit Code (HUC): 180300030701 (EPA, 2019). The principal drainage in the vicinity of the Project is Cuddy Creek which runs parallel to the Frazier Mountain Park Road pipeline alignment. On the east side of I-5, Cuddy Creek flows into Castac Lake. Castac Lake, which is located approximately one mile northeast of the Lebec Well 04 Site, also receives water from unnamed tributaries which originate in the surrounding hillsides and flow through Crane Canyon to the south of the lake and Bear Canyon to the east of the lake. Surface water inputs to Castac Lake are supplemented with groundwater pumped by Tejon Ranch.

2.2 Project Site

The Project area is composed of sagebrush shrubland, annual grassland, ruderal land, and developed area in the unincorporated community of Lebec.

Lebec Well 04 Site 04 and New Pipeline to Lebec Well 04

The Lebec Well 04 site is located within Tejon Ranch southeast of I-5 and adjacent to the northbound rest area. The Well 04 site is surrounded by annual grassland used for grazing horses and cattle on the ranch, and is near a parking area used for Tejon Ranch events, but as of the August 3, 2020 field survey is currently being

used as a staging area for a Southern California Edison utility project. The Well 04location is also east of the northbound Lebec Rest Stop and north of Cuddy Creek. The adjacent proposed pipeline (labeled "New Pipeline to Lebec Well 04" on **Figure 4**), travels through annual grassland and sagebrush shrubland on Tejon Ranch, then passes through annual grassland and ruderal habitat, including a large valley oak (*Quercus lobata*) within and adjacent to the I-5 Rest Stop before entering another stand of sagebrush shrubland on Tejon Ranch, directly southeast of I-5. The pipeline then travels through developed habitat of the paved Interstate where it will connect to the proposed Lebec/State Interconnection Pipeline northwest of I-5, along Lebec Road.

Lebec/State Interconnection Pipeline

As illustrated on **Figure 4**, Lebec/State Interconnection Pipeline runs parallel (right-of-way) to the interstate along Lebec Road. This proposed pipeline would be located entirely within ruderal habitat composed of compacted dirt right-of-way.

Chimney Canyon Tank

The Chimney Canyon (250,000 gallon) tank would be located within a fenced area described as a combination of ruderal habitat and development. Most of the site is developed into large water storage tanks atop cement pads. Remaining substrate is composed of compacted dirt, gravel, and scattered weedy grasses and forbs. Cement pads housing equipment and various industrial debris were present. Surrounding lands are grassland, sagebrush shrubland, and rural residential homes.

Frazier Mountain Park Road Pipeline Alignment

The Frazier Mountain Park Road Pipeline Alignment runs west from a compacted dirt lot adjacent to Wainright Road to Cuddy Canyon road along rights-of-way parallel to Frazier Mountain Road. The alignment crosses Frazier Mountain Park Road twice, turning north at the second crossing and running parallel with Cuddy Canyon Road. The alignment terminates less than half a mile south of Cuddy Creek. Debris and refuse are scattered throughout the path of the alignment. The alignment runs adjacent to power poles on the south side of Frazier Mountain Park Road, as well as a fenced residence and fenced State Park land. The east half of the alignment runs through a relatively urbanized area and across Lebec Road, while the western half of the Frazier Mountain Road alignment abuts areas of sagebrush shrubland and grasslands. Roadside drainage ditches are present within the proposed pipeline alignment.

Frazier Mountain High School Project Areas and FMHS Pipeline Alignment

Habitats of the area proposed for the FMHS tank and booster pump are best described as a combination of ruderal and developed. The substrate is composed of asphalt and compacted dirt and the location is adjacent to two baseball fields. There is a large existing tank onsite and a small building that houses an irrigation booster pump and other components of the water system. Equipment and appurtenant features sit atop concrete pads. Various pieces of equipment and refuse are scattered throughout the site. Surrounding habitats include sagebrush scrub and grassland. Several of the drainages observed around FMHS contained collections of sediment, standing water, and an abundance of emergent, wetland vegetation.

The FMHS pipeline travels from the tank and booster pump site through the developed FMHS campus and follows Falcon Way in a general northerly direction. The pipeline proceeds northward from Falcon Way, crosses an ephemeral stream and enters hilly grasslands and sagebrush shrubland habitat through Castac Valley and eventually meets the alignment on Frazier Mountain Park Road illustrated on **Figure 5**. Sagebrush cover was scarce along the steep slopes and consisted of grass lands. At the top of the main hill there were a group of standing shrubs that were large and looked almost like trees. There seems to be an existing pipeline that is leaking and feeding this shrub grouping. At this same location there is a survey marker that shows the dividing line between Los Angeles County and Kern County. On the down slope of the main hill was mostly various grasses, thistle various wildflowers, bunchgrasses, and forbs. There are several ephemeral streams located along or near the pipeline route.

2.3 Biological Communities

Six biological communities were identified within the Project areas: sagebrush shrubland, annual grassland, ruderal, developed, ephemeral and intermittent streams. Scattered oak and cottonwood trees were present throughout the Project areas. Each of these biological communities has value to native wildlife, as discussed below.

Representative photographs of the Project area and relevant observations are included in **Appendix A** at the end of this document.

2.3.1 Sagebrush Shrubland

Sagebrush shrubland habitats are characterized by stands of big sagebrush with plants ranging in height from approximately 2 to 10 feet and density ranging from open and widely spaced to closely spaced with canopies touching. Sagebrush is often mixed with other similar species, which tends to result in stands of shrubs of uniform size and spacing. In some areas, sagebrush stands support an understory of perennial grasses and forbs. These plant communities provide important foraging opportunities for ungulates and small mammals, such as jackrabbits, as well as providing important habitat for a variety of avian species, mammals, reptiles, and invertebrates. Primary threats to this ecosystem include agriculture and development. While well-adapted to natural fire regimes, sagebrush shrubland habitats will revert to grassland habitats dominated by invasive species if fires or other disturbance occurs too frequently.

Sagebrush shrubland is the dominant habitat type within the Project area. Apart from small sections of ruderal habitat near the high school, the majority of the Frazier Mountain High School pipeline alignment runs through sagebrush shrubland (Photographs **Appendix A**). The pipeline running through Castac Valley is also a mix of sagebrush shrubland, mustard grass (*Brassica juncea*) and grassland. Portions also include areas dominated by forbs. Other identified species include White sage (*Salvia apiana*), California sagebrush (*Asteraceae californica*), cobweb thistle (*Cirsium occidentale*), big sagebrush (*Astemisia tridentiata*), coyote brush (*Baccharis pilularis*), and California buckwheat (*Erigonium fasciculatum*).

The southernmost portion of the Lebec Well 04 alignment crosses through sagebrush habitat amid grassland and ruderal areas, as does the northernmost portion of the alignment before crossing I-5. The following species were dominant within the sagebrush shrubland habitat areas observed: big sagebrush, rubber rabbitbrush *(Ericameria nauseosa),* thick leaved yerba santa *(Eriodictyon crassifolium*, *Astragalus* sp., *Eriogonum* sp., and *Eriastrum* sp.*)* These plant species provide excellent cover for small mammals and rodents, inhibiting larger predators. Vegetation density is greatest along portions of the Lebec alignment, with more variable density along the accessible portions of the FMHS alignment. In areas along concrete drainage channels where shrubs were less dense, lower growing native forbs such as California fuchsia *(Epilobium canum)* were observed. This is extremely high value habitat, not only due to the cover and foraging opportunities it provides for animal species, but also because it limits the spread of highly competitive invasive plants. Despite the proximity to ruderal and ruderal-annual grassland habitats, the areas dominated by sagebrush shrub species contained very few exotic plant species.

At the time of the November 2019 survey, a prairie falcon (*Falco mexicanus*) was observed flying and perching within an oak adjacent to the sagebrush habitat southeast of the FMHS pipeline alignment. While this habitat provides cover for small mammals, rodents, and reptiles, the abundance of these species also attracts predators. Predator species likely expected to occur within this habitat include raptors (*Accipiter*, *Buteo*, and *Falco* species), coyote (*Canis latrans*), American badger (*Taxidea taxus*), bobcat (*Lynx rufus*), long-tailed weasel (*Mustela frenata*), gray fox (*Urocyon cinereoargenteus*), red fox (*Vulpes vulpes*), and striped skunk (*Mephitis mephitis*). Foraging opportunities within this habitat are also expected to attract ungulates such mule deer (*Odocoileus hemionus)*, pronghorn (*Antilocapra americana),* and Tule elk *(Cervus canadensis nannodes),* which in turn are expected to attract larger predators such as mountain lion (*Puma concolor*). Other species observed during the field survey include black-tailed jackrabbit (*Lepus californicus*) and desert cottontail (*Sylvilagus audubonii*). Kangaroo rat (*Dipodomys* sp.)

tracks were observed in the alignment parallel to Falcon Way, as seen in Photograph 39. Additional species expected to occur here include songbirds (*Vireo, Setophaga*, and *Zonotrichia* species), California quail (*Callipepla californica*), California ground squirrel (*Otospermophilus beecheyi*), deer mice (*Peromyscus maniculatus*), desert wood rat (*Neotoma lepidas*) and various bat species. Proximity to the Los Padres National Forest and other protected lands (See Photographs Appendix A), makes this region highly valuable for dispersal of species between coastal and interior portions of the state as well as northern and southern migrations.

During the August 3, 2020 survey the following species were observed: California ground squirrel, dessert cottontail, American crow (*Corvus brachyrhynchos*), brown-headed cowbird (*Molothrus ater*), mockingbirds (*Mimus polyglottos*) and a house finch (*Haemorbous mexicanus*). Many wildlife tracks were observed including Kangaroo rat, coyote, racoon (*Procyon lotor*), and mule deer , as seen in Photographs 61, 62, and 64.

2.3.2 Annual Grassland

Grasslands are characterized by the dominance of grass and wildflower species and a general absence of woody plants. Grasslands not only serve an important ecological function through soil stabilization and water storage, but also provide valuable habitat for wildlife species. Grasslands in California are largely dominated by nonnative annuals, which are sensitive to drought conditions and wildfires.

Grassland habitats observed within surveyed Project areas appeared to be somewhat ruderal in nature, subject to ground disturbance, including disking and grazing within the Lebec Well 04site. Native vegetation was essentially absent in the surveyed ruderal grasslands. Areas classified as ruderal-annual grassland, as seen in Photographs 1, 4, 6, and 7, include the area surrounding the Lebec Well 04 and the fenced area along the Lebec alignment. Invasive weedy vegetation, including wild oats (*Avena fatua*), Bermuda grass (*Cynodon dactylon*), ripgut brome (*Bromus diandrus*), and mustard provide near 100% cover in the area surrounding the Lebec Well 04 site. Within the fenced area along the Lebec alignment, species associated with the sagebrush shrubland habitat within the Project area were observed, including thickleaf yerba santa and *Astragalus* sp. A valley oak (*Quercus lobata*) near the Lebec Well 04 site in which numerous western bluebirds (*Sialia mexicana*) were observed perching was the only woody species within this habitat. Soils are moderately friable, providing marginal habitat for burrowing species. Although ruderal, these annual grasslands provide refuge and foraging habitat for a variety of wildlife species.

The annual grasslands observed within the Project area were adjacent to both sagebrush shrubland habitat as well as ruderal habitats and development such as compacted dirt roads and a rest stop. Proximity to high and low value habitat means a wide variety of species are expected to occur here. Generalist and desert species observed during the survey include California scrub jay (*Aphelocoma californica*), American crow, common raven (*Corvus corax*), desert cottontail, and common side-blotched lizard (*Uta stansburiana*). Due to the cover provided by vegetation and the suitability for burrowing, the following species are expected to occur within this habitat: common lagomorphs (*Lepus californicus*), Botta's pocket gophers (*Thomomys bottae*), California ground squirrels, deer mice, and California voles (*Microtus californicus*). The grassland areas are also expected to provide foraging habitat for raptors and various bats. A northern harrier (*Circus hudsonius*) was observed during the field survey. Some additional wildlife species expected to occur within annual grassland communities of the project area include Great Basin fence lizard (*Sceloporus occidentalis longipes*), Pacific gophersnake (*Pituophis catenifer catenifer*), California kingsnake (*Lampropeltis californiae*), western rattlesnake (*Crotalus oreganus*), American kestrel (*Falco sparverius*), and coyote.

2.3.3 Ruderal

Ruderal habitats are characterized by a high level of human disturbance and absence of vegetation or dominance of non-native plant species. Ruderal and developed lands of the Project area represent relatively low-quality habitat for the majority of native wildlife species.

During the field surveys, rights-of-way parallel to Frazier Mountain Park Road and I-5 were composed of compacted dirt. The open area adjacent to the rest stop and the large lot composed of compacted dirt where

the Lebec Well 04 Site pipeline runs parallel with I-5 can be classified as ruderal habitats. The area within the new tank site and the southwestern terminus of the FMHS alignment were highly disturbed as well, but directly adjacent to sagebrush shrubland habitat. The following species were dominant within the ruderal areas observed: wild oats, Bermuda grass, ripgut brome, mustard, doveweed (*Croton setigerus),* and yellow star-thistle *(Centaurea solstitialis)*. These weedy and invasive species provide some value to wildlife life in the form of forage and refuge. Currently a native valley oak tree sits along the path of the Lebec Well 04alignment adjacent to Lebec Service Road. Multiple western sycamores (*Platanus racemose*) were also observed in the vicinity of the alignment adjacent to the rest stop. Ruderal habitat adjacent to I-5 and Frazier Mountain Park Road were all similarly composed of compacted dirt and weedy plant species (Photographs 17–20 and 49–51).

Ruderal areas within the Project vicinity have minimal value to wildlife as habitat due to the frequent human disturbance, presence of domestic dogs and cats, and the lack of native vegetation. Barren compact dirt and debris dominates the ruderal portions of the Project site. At the time of the November 2019 survey, multiple killdeer (*Charadrius vociferous*) were observed in the vicinity of the Lebec Well 04 alignment southeast of I-5. Numerous common ravens were observed perching in the valley oak and throughout the ruderal areas of the Project site during the survey. Frequent human disturbance and activities related to habitation, such as the presence of food items and improper disposal methods are likely the cause of this opportunistic species' population growth. Other species expected to occur here include Botta's pocket gophers, California ground squirrels, raccoons, coyotes, and striped skunks.

Despite fragmentation of the surrounding lands and the site's proximity to I-5, ruderal habitats within the Project site would be expected to be utilized as a wildlife movement corridor because this region offers an important linkage between patches of suitable habitat. This is evidenced by the carcass of a western mule deer observed on the south side of Frazier Mountain Park Road during the November 2019 survey.

2.3.4 Developed

Urban development was present in the form of paved roads, I-5, the Lebec Northbound Rest Area, FMHS, and portions of the Chimney Canyon Tank Site. Developed lands generally represent low-quality habitat for many native wildlife species. However, in this region, some developed habitats, such as paved roads and constructed crossings often serve as movement corridors for wildlife between areas of high-quality habitat. For example, there are at least four man-made wildlife crossings along I-5 connecting oak woodland, grassland, and sagebrush shrubland habitats in the vicinity of the Project. Species expected to pass through developed habitats of the Project area include those inhabiting adjacent habitats listed above.

2.3.5 Ephemeral Drainage

An ephemeral drainage is a stream or portion of a stream which flows briefly in response to precipitation in the immediate vicinity. An ephemeral streambed is always above the groundwater reservoir and does not receive subsurface flow. In arid regions, ephemeral drainages remain dry for most of the year and typically do not support riparian vegetation or hydric soils.

Because of the mountainous topography, numerous ephemeral drainages are present within the Project areas. Several of the ephemeral drainages on the hilly terrain around FMHS were channelized and filled with river rocks or are cement-lined. Additional ephemeral streams cross the Project area north of FMHS and south of Frazier Mountain Park Road as well as crossing the alignment adjacent to I-5, the Lebec Northbound Rest Area, and along Frazier Mountain Park Road. These unnamed streams feed into Cuddy Creek which then delivers water to Castac Lake. The characteristics of the ephemeral drainages onsite were highly variable. Some were flat and had characteristics of desert wash; some were consistent with the features of an excavated roadside drainage ditch; some were lined with cement or rocks; and some were incised and had characteristics of an arroyo.

2.3.6 Intermittent Stream

An intermittent drainage is a stream where portions flow continuously, only at certain times of the year, such as when it receives water from a spring, groundwater source, or from a surface source, like snowmelt. These types of drainages are often referred to as "seasonal." At low flow there may be dry segments alternating with flowing segments, and sometimes, especially in arid regions, these streams are dry for much of the year. Intermittent drainages often have hydric soils and support riparian vegetation, although these features may be absent in portions of the stream.

Cuddy Creek is the largest intermittent stream in the vicinity of the Project, although there are several other unnamed tributaries that cross the proposed alignments and feed into Cuddy Creek. Portions of the Cuddy Creek channel were incised and had characteristics of a desert arroyo while the floodplain and other portions of the channel were flat, sandy, largely unvegetated, and consistent with desert wash. At least three other intermittent streams with the same or similar characteristics were observed crossing the Project's proposed alignments within the surveyed areas.

2.4 Soils

Ten soil mapping units representing five soil series were identified within the project area: Gorman sandy loam, 9 to 15 percent slopes; Gorman sandy loam, 15 to 30 percent slopes, eroded; Gorman sandy loam, 30 to 50 percent slopes, eroded; Greenfield sandy loam, 2 to 9 percent slopes; Hanford coarse sandy loam, 2 to 9 percent slopes; Hanford sandy loam, 2 to 9 percent slopes; Hanford gravelly sandy loam, 2 to 9 percent slopes; Xerofluvents, 0 to 5 percent slopes; and Hawk gravelly sandy loam, 9 to 15 percent slopes. The last map unit is part of an area that has not been surveyed because access was denied and comprises 16.5 percent of the mapped Project area. Xerofluvents are hydric floodplain soils found in Mediterranean climates. Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions hydrophytic vegetation is supported.

Gorman sandy loam, 9 to 15 percent slopes comprises 9.8 percent of the mapped Project area; Gorman sandy loam, 15 to 30 percent slopes, eroded comprises 3.4 percent of the mapped Project area; and Gorman sandy loam, 30 to 50 percent slopes, eroded comprises 6.6 percent of the mapped Project area. These soils are not considered prime farmland. The Gorman soil series consists of well drained soils with medium to rapid runoff and moderately slow permeability. Gorman soils are used mainly for grazing. Vegetation in uncultivated areas is mainly annual grasses and forbs, perennial grasses, and sagebrush.

Greenfield sandy loam, 2 to 9 percent slopes comprises 2 percent of the mapped Project area. This soil is considered prime farmland if irrigated. The Greenfield series consists of deep, well drained soils that formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources. Greenfield soils are used for the production of a wide variety of irrigated field, forage and fruit crops and also for growing dryland grain and pasture.

Hanford coarse sandy loam, 2 to 9 percent slopes comprises 22.9 percent of the mapped Project area; Hanford sandy loam, 2 to 9 percent slopes comprises 13.8 percent of the mapped Project area; and Hanford gravelly sandy loam, 2 to 9 percent slopes comprises 8.5 percent of the mapped Project area. These soils are considered prime farmland if irrigated. The Hanford series consists of very deep, well drained soils with negligible to low runoff and moderately rapid permeability. Hanford soils are used for a variety of agricultural crops, urban development, and dairies. In uncultivated areas, vegetation is typically composed of annual grasses.

Xerofluvents, 0 to 5 percent slopes comprises 9 percent of the mapped Project area. This soil is not considered prime farmland. Xerofluvents are a great group of the Entisol soil order. These soils are somewhat excessively drained with a low runoff class.

Hawk gravelly sandy loam, 9 to 15 percent slopes comprises 7.6 percent of the mapped Project area. This soil is not considered prime farmland. The Hawk series consists of very deep, well drained soils that formed in alluvium derived from granite.

The complete Natural Resources Conservation Service (NRCS) Web Soil Survey report is available in **Appendix E** at the end of this document.

2.5 Natural Communities of Special Concern

Natural communities of special concern are those that are of limited distribution, distinguished by significant biological diversity, or home to special status species. CDFW is responsible for the classification and mapping of all natural communities in California. Just like the special status plant and animal species, these natural communities of special concern can be found within the CNDDB.

No natural communities of special concern were observed within surveyed Project areas, however, according to CNDDB, Valley Needlegrass Grassland, a designated natural community of special concern, surrounds Frazier Mountain High School. Additional natural communities of special concern mapped adjacent to Project areas include Valley Oak Woodland, Southern Cottonwood Willow Riparian Forest, and Wildflower Field.

2.6 Designated Critical Habitat

The USFWS often designates areas of "Critical Habitat" when it lists species as threatened or endangered. Critical Habitat is a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

According to CNDDB and IPaC, designated critical habitat is absent from the Project areas.

2.7 Wildlife Movement Corridors

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation.

The Project runs through a mountainous area that contains several ridges and valleys which are likely used for migratory and dispersal movements of large and small mammals. *Deer Crossing* signs were observed, and the carcass of a mule deer was present along Frazier Mountain Park Road at the time of the November 2019 field survey. Creek beds of unnamed water features cross the Project site in multiple locations, which could serve as a corridor for wildlife inhabiting the surrounding sagebrush shrubland and grassland habitat. Even developed portions of the site that are frequently subject to human-related disturbance would be expected to be utilized as a wildlife movement corridor because this region offers an important linkage between patches of suitable habitat. In fact, large portions of the Project area are mapped as Essential Connectivity Areas (CDFW, 2020).

2.8 Special Status Plants and Animals

California contains several rare plant and animal species. In this context, "rare" is defined as species known to have low populations or limited distributions. As the human population grows, resulting in urban expansion which encroaches on the already limited suitable habitat, these sensitive species become increasingly more vulnerable to extirpation. State and Federal regulations have provided the CDFW and the USFWS with a mechanism for conserving and protecting the diversity of plant and animal species native to California. Numerous native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species legislation. Other formal designations include "candidate" for listing or

"species of special concern" by CDFW. The California Native Plant Society (CNPS) has its list of native plants considered rare, threatened, or endangered. Collectively these plants and animals are referred to as "special status species."

A thorough search of the CNDDB for published accounts of special status plant and animal species was conducted for the *Lebec* and *Frazier Mtn.* 7.5-minute quadrangles that contain the Project area in its entirety, and for the 10 surrounding quadrangles: *La Liebre Ranch, Liebre Mtn., Black Mtn., Alamo Mountain, Lockwood Valley, Cuddy Valley, Pleito Hills, Grapevine, Pastoria Creek,* and *Winters Ridge*. **Figure 2** shows the Project's 7.5-minute quadrangles, according to USGS Topographic Maps. An official species list with their potential to occur within the Project area are listed in **Table 1** and **Table 2** on the following pages. Additionally, Section 7 determinations are made in **Section 3.5** and in **Table 3**. Raw data obtained from CNDDB and IPaC are available in **Appendix B** and **Appendix C** respectively, at the end of this document. Other sources of information utilized in the preparation are listed above in **Section 1.3** Study Methodology

Table 1. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity

Species	Status	Habitat	Occurrence on Project Site
American badger *(Taxidea taxus)*	CSC	Grasslands, savannas, and mountain meadows near timberline are preferred. Most abundant in drier open spaces of shrub and grassland. Burrows in soil.	**Possible**. Although no American badger individuals or sign were observed during the field survey, suitable habitat in the form of sagebrush scrub and grassland was present in the Project area. The nearest observation of this species was recorded in 2003, approximately 7 miles southeast of the Project site.
arroyo toad (*Anaxyrus californicus*)	FE, CSC	Occurs in semi-arid regions near washes or intermittent streams, including valley-foothill, desert riparian, and desert wash. Prefers rivers with sandy banks, willows, cottonwoods, and sycamores. Found in loose, gravelly areas of streams in drier parts of range.	**Unlikely.** Marginal habitat is present in the form of washes and dry creek beds within sagebrush shrublands, but the Project is outside of the accepted geographic range and near the upper altitudinal limit of this species. The nearest recorded observation occurred approximately 7 miles south of the Project site (CNDDB, 2020).
bald eagle *(Haliaeetus leucocephalus)*	CE, CFP	Resides in old growth forests as well as lower montane coniferous forests. Nests are generally found in large, old-growth trees within a mile of water. Nests and winters along ocean shores, lake margins, and rivers.	**Possible**. Suitable nesting habitat is absent from the Project area, however, foraging habitat is present within Project areas near Tejon Ranch and the pipeline alignment from FMHS to Frazier Mountain Park Road. Bald eagles have been found to use the area surrounding Castac Lake as wintering habitat, with observations recorded in 2007 and 2008.
blunt-nosed leopard lizard (*Gambelia sila*)	FE, CE, CFP	Inhabits semi-arid grasslands, alkali flats, low foothills, canyon floors, large washes, and arroyos, usually on sandy, gravelly, or loamy substrate, sometimes on hardpan. Cannot survive on lands under cultivation. Resides in sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. Known to bask on kangaroo rat mounds and often seeks shelter at the base of shrubs, in small mammal burrows, or in rock piles. Adults may excavate shallow burrows but rely on deeper pre-existing rodent burrows for hibernation and reproduction.	**Absent**. The Project is located outside of the accepted geographical range of this species. The dense vegetative cover within the sagebrush scrub and grassland habitats and the disturbed nature of the ruderal habitats of the Project area are generally unsuitable for this species. Although this species is known to occur along the valley floor and within the foothills north of the Tehachapi Mountains, blunt-nosed leopard lizard does not typically inhabit lands with steep slopes, mountain ranges, or ridges above elevations of 2,600 feet (Sandoval, Johnson, & Williams, 2019).
burrowing owl (*Athene cunicularia*)	CSC	Resides in open, dry annual or perennial grasslands, deserts, and shrublands with low growing vegetation. Nests underground in existing burrows created by burrowing mammals, most often ground squirrels.	**Possible.** The Project's elevation and terrain are unsuitable for breeding. However, this species could potentially winter within the grasslands or ruderal areas of the Project site. The sagebrush shrubland habitat that makes up most of the Project site is unsuitable for this species. Areas directly adjacent to the Lebec Well 04 site have been mapped as secondary

Species	Status	Habitat	Occurrence on Project Site
			suitable habitat according to a burrowing owl habitat suitability model (Dudek & USFWS, 2013).
California condor *(Gymnogyps californianus)*	FE, CE, CFP	Typically nests in cavities in canyon or cliff faces but has also been recorded nesting in giant sequoias in Tulare County. Requires vast expanse of open savannah, grassland, and/or foothill chaparral in mountain ranges of moderate altitude. Forages up to 100 miles from roost/nest site.	**Present.** Condors have been well documented nesting and roosting year-round in the Project's vicinity (Tejon Ranch, Tehachapi Mountains, Angeles National Forest, and Los Padres National Forest). The Project area contains suitable foraging habitat.
California glossy snake (*Arizona elegans occidentalis*)	CSC	Inhabits arid scrub, rocky washes, grasslands, and chaparral. Prefers open areas with loose soil for easy burrowing.	**Possible.** Suitable habitat is present within the Project areas in the form of sagebrush scrub, grassland, dirt roads, sandy creek beds, and desert washes. The nearest recorded observation of this species occurred in 1994, approximately 1.5 miles south of FMHS in the Hungry Valley State Vehicular Recreation area.
California horned lark (*Eremophila alpestris actia*)	CWL	Frequents open habitats, including short-grass prairie, mountain meadows, open coastal plains, fallow grain fields, and alkali flats. Found primarily in coastal regions, including Sonoma and San Diego Counties.	**Possible.** The grassland area of the Lebec Well 04 site could serve as suitable nesting habitat for this species. Suitable foraging habitat in the form of grasslands and shrublands are present within the Project site. The nearest recorded observation of this species was recorded in 2004 approximately 3.5 miles southeast of the Project site.
California legless lizard *(Anniella sp.)*	CSC	Inhabits a variety of habitats which contain moist, loose soils and plant cover. Often can be found under objects such as rocks, boards, driftwood, and logs.	**Possible**. Suitable habitat exists along dry creek beds and desert washes observed within the surveyed areas. There is a research grade observation of this species 2.5 miles west of the Frazier Mountain Road alignment from May of 2019 (iNaturalist.org web application, 2020).
California red-legged frog *(Rana draytonii)*	FT	Inhabits perennial rivers, creeks, and stock ponds with vegetative cover within the Coast Range and northern Sierra foothills.	**Absent**. Habitat required by this species is absent from the Project site.
coast horned lizard (*Phrynosoma blainvillii*)	CSC	Found in grasslands, coniferous forests, woodlands, and chaparral, primarily in open areas with patches of loose, sandy soil and low-lying vegetation in valleys, foothills, and semi-arid mountains. Frequently found near ant hills and along dirt roads in lowlands along sandy washes with scattered shrubs.	**Possible**. Numerous observations of this species have been recorded in the vicinity of Castac lake and the surrounding hillsides (CNDDB). This species was observed on several occasions (2003, 2005, and 2006) within big sagebrush/rabbitbrush scrub habitat during focused surveys of the Project area between FMHS and Frazier Mountain Park Road (Kern County Planning Department, 2009).

Species	Status	Habitat	Occurrence on Project Site
coastal California gnatcatcher (*Polioptila californica californica*)	FT, CSC	Obligate species of coastal sagebrush scrub habitats in southern California. Found at elevations below 2500 feet, typically along washes, mesas, and slopes.	**Unlikely.** The Project area is outside of the accepted geographic range and altitudinal range of this species (USFWS, 2010)). The nearest recorded observation of this species was reported outside of its range, approximately 5.5 miles southeast of the Project site in in 2006 (CNDDB, 2020).
coastal whiptail AKA: San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*)	CSC	Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage.	**Possible**. Suitable habitat is present throughout Project areas. The nearest recorded observation of this subspecies was reported approximately 5.5 miles southeast of the Project in 2004 (CNDDB, 2020). The Project is located just north of the accepted geographic range of this subspecies.
conservancy fairy shrimp *(Branchinecta conservatio)*	FE	Found in large, cool-water vernal pools with moderately turbid water.	**Unlikely**. No vernal pools were observed within surveyed portions of the Project site or on historical aerial photography. Vernal pools have the potential to exist around Castac Lake after periods of flooding.
Cooper's hawk (*Accipiter cooperii)*	CWL	This species occurs in woodlands but is also commonly associated with urban habitats. Cooper's hawks commonly prey on smaller avian species and nest within conifers, oaks, and ornamental trees.	**Likely**. Suitable nesting and foraging habitat is present within the Project areas. This species is common in urban habitats. The nearest recorded observation of this species occurred approximately 4.5 miles southwest of the Project site in 2013 (CNDDB, 2020).
Crotch bumble bee (*Bombus crotchii*)	CCE	Occurs throughout coastal California, as well as east to the Sierra-Cascade crest, and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia,* and *Eriogonum*.	**Possible**. All nearby recorded observations of this species come from historical collections from over 40 years ago. There is potential for food plant genera to occur in the sagebrush and grassland habitats of the Project site.
ferruginous hawk (*Buteo regalis*)	CWL	Inhabits open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Preys on lagomorphs, ground squirrels and mice.	**Possible.** Foraging habitat is present within Project areas. This species is a winter migrant and would not be expected to breed or nest in the vicinity. The nearest recorded observation of this species occurred approximately 7.5 miles east of the Project site in 2004 within native and non-native grassland habitat (CNDDB, 2020).
foothill yellow-legged frog (*Rana boylii)*	CCT, CSC	Frequents rocky streams and rivers with rocky substrate and open, sunny banks in forests, chaparral, and woodlands. Occasionally found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools.	**Absent**. Habitat required by this species is absent from the Project site. The nearest recorded observation of this species occurred approximately 7 miles southwest of the Project site in 2014.
golden eagle (*Aquila chrysaetod*)	CFP	This species typically nests on cliff ledges or large trees, rarely on the ground. They prefer an expanse of	**Likely.** Suitable foraging habitat is present within Project areas. Nesting habitat was not observed within the

Species	Status	Habitat	Occurrence on Project Site
		open terrain and are found over tundra, prairie, rangeland, desert, and grasslands.	surveyed areas. This species is known to occur within Tejon Ranch and may inhabit the Project area year-round. There is one potential nesting observation recorded approximately 5.5 miles east of FMHS.
grasshopper sparrow (*Ammodramus savannarum*)	CSC	Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Species is loosely colonial when nesting. Inhabits dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes.	**Possible.** The Project is located within the historic and current breeding range of this species. Suitable nesting and foraging habitat is present within the surveyed areas. There is a recorded observation of this species approximately 4.5 miles southeast of Castac Lake.
Green sea turtle (*Chelonia mydas*)	FT	Found in shallow waters, except when migrating, inside reefs, bays, and inlets. Attracted to lagoons and shoals with an abundance of marine grass and algae. Open beaches with a sloping platform and minimal disturbance are required for nesting.	**Absent.** Habitat required by this species is absent from the Project site.
least Bell's vireo *(Vireo bellii pusillus)*	FE, CE	This migratory species breeds in southern California. Breeding habitat consists of dense, low, shrubby, riparian vegetation in the vicinity of water or dry river bottoms. By the early 1980s, this species was extirpated from most of its historic range in California, including the Central Valley. This species now occurs exclusively along the coast of southern California (United States Fish and Wildlife Service, 1998).	**Unlikely.** Suitable nesting habitat was not observed within the surveyed areas. Focused surveys for this species in 2007 and 2011 in the greater Tejon Ranch area resulted in no observations (Dudek & USFWS, 2013). Suitable breeding and foraging habitat for this nearly obligate riparian species has been modeled around Castac Lake. However, there are no recent recorded observations of this species. This species could potentially pass through the site during migration.
loggerhead shrike (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian areas, desert scrub, and agricultural hedgerows.	**Likely**. There have been two recent recorded observations of this species approximately 6 miles southeast of the Project area. Suitable nesting and foraging habitat is present within habitats of the Project area.
Mount Pinos sooty grouse (*Dendragapus fuliginosus howardi*)	CSC	Inhabitant of southern Sierra Nevada mountains, south of Kings Canyon, and now extirpated from the historic southern portion of its range in Piute and Tehachapi mountains (Shuford & Gardali, 2008). Associated with high elevation montane coniferous forests, typically *Abies*-dominated associations.	**Absent.** Although the Project is located within its historic range, this species has been extirpated from the Piute and Tehachapi Mountains. Suitable montane coniferous habitat was not observed within the surveyed areas.
Nelson's antelope squirrel *(Ammospermophilus nelsoni)*	CT	Found in the western San Joaquin Valley on dry, sparsely vegetated loamy soils. Relies heavily on existing small mammal burrows.	**Unlikely**. Suitable habitat for this species was not observed within the surveyed areas. The Project area is outside of the accepted distribution range of this species. The only nearby recorded observations of this species correspond to historic collections.

Species	Status	Habitat	Occurrence on Project Site
northern California legless lizard (*Anniella pulchra*)	CSC	Found primarily underground, burrowing in loose, sandy soil. Forages in loose soil and leaf litter during the day. Occasionally observed on the surface at dusk and night.	**Possible**. Suitable habitat exists along dry creek beds and desert washes observed within surveyed areas. There is a research grade observation of this species 2.5 miles west of the Frazier Mountain Road alignment from May of 2019 (iNaturalist.org web application, 2020).
pallid bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwell 04ing arthropods, and occasionally takes insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and other man-made structures.	**Unlikely.** The Project site is outside the current modeled distribution range of this species. Foraging habitat exists throughout the Project site for this species. Suboptimal roosting habitat in the form oak trees are present within the Project site.
prairie falcon (*Falco mexicanus*)	CWL	Inhabits dry, open terrain, either level or hilly, in a variety of scrublands and grasslands. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	**Present**. Species observed onsite during the biological survey.
purple martin (*Progne subis*)	CSC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities as well as in human-made structures. Nest often located in tall, isolated trees and snags.	**Possible.** This species is known to occur within Tejon Ranch and the Tehachapi Mountains. Nesting habitat in the form of oak trees was observed within the surveyed Project areas.
Riverside fairy shrimp (*Streptocephalus woottoni*)	FE	Found only in vernal pools, ponds, and other ephemeral pool-like bodies of water. During dry periods, cysts of the species lay dormant in the soil and hatch when adequate rainfall fills the ponds and pools.	**Unlikely**. No vernal pools were observed within the surveyed portions of the Project site. The area surrounding Castac Lake could potentially serve as marginal habitat for this species in wet years.
San Joaquin coachwhip *(Masticophis flagellum ruddocki)*	CSC	Found in open dry habitats with little or no tree cover in valley grassland and saltbush scrub communities in the San Joaquin Valley. Relies on mammal burrows for refuge and oviposition sites.	**Possible**. Suitable habitat exists along dry creek beds and desert washes observed within surveyed areas. The nearest recorded observation of this species occurred approximately 11 miles northwest of the Project site in 2010.
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, CT	Underground dens with multiple entrances in alkali sink, valley grassland, and woodland in valleys and adjacent foothills.	**Unlikely.** The rugged terrain and dense vegetative cover found throughout most of the Project area is generally unsuitable for this species. The Project area is just outside of the accepted distribution range and above the elevation at which this species typically occurs. Although a satellite population of kit foxes is known to inhabit a portion of Tejon Ranch located 10 miles north of the Project, focused surveys in 2009 indicated an absence of kit foxes on the southern portion of Tejon Ranch (Cypher, Van Horn Job, Tennant, & Phillips, 2010).

Species	Status	Habitat	Occurrence on Project Site
southern rubber boa (*Charina umbratical*)	CT	Inhabits oak-conifer and mixed-conifer forests at elevations between 5,000 to 8,200 feet where rocks, logs, and other debris provide shelter. The range of this species is unclear, but it is known to occur in montane southern California in the San Bernardino and San Jacinto Mountains. There is some question as to whether the *Charina* species found in the southern Sierra Nevada, Tehachapi Mountains, and Mt. Pinos is in fact *C. umbratical*.	**Absent.** The Project area is below the altitudinal range of this species. This species is known to occur in the Los Padres National Forest at higher elevations, west of the Project area. Suitable montane conifer forest habitats were not observed within the surveyed areas.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE, CE	Found primarily in extensive willow thickets. Breeding populations are found only in isolated meadows of the Sierra Nevada, and along the Kern, Santa Margarita, San Luis Rey, and Santa Ynez Rivers in southern California. Between August and September, this species migrates to wintering grounds in Mexico, Central America, and possibly northern South America.	**Unlikely**. Suitable breeding and foraging habitat were not observed within the surveyed areas. Focused surveys for this species in 2007 and 2011 in the greater Tejon Ranch area resulted in no observations. Suitable breeding and foraging habitat for this species has been modeled around Castac lake (Dudek & USFWS, 2013).
Tehachapi pocket mouse (*Perognathus alticola inexpectatus*)	CSC	Inhabits arid annual grassland and desert shrub communities, but also found in fallow grain fields and in Russian thistle. Burrows for cover and nesting and will hibernate during extreme weather. Forages on open ground and under shrubs.	**Possible.** Suitable habitat was observed within surveyed areas. There are several recorded occurrences of this species in the vicinity of the Project.
Tehachapi slender salamander (*Batrachoseps stebbinsi*)	CT	Found in valley-foothill hardwood-conifer & valley-foothill riparian in the Piute and Tehachapi mountains of Kern County. Prefers wet talus slopes or log-strewn hillsides with a steep, north-facing exposure.	**Possible.** This species is known to occur within Tejon Ranch. Habitats observed within the surveyed areas were marginal, but suitable riparian oak-dominated habitats were present within 1 mile of the Project site.
Tipton kangaroo rat *(Dipodomys nitratoides nitratoides)*	FE, CE	Burrows in soil. Often found in grassland and shrubland from the valley floor to approximately 300 feet in elevation.	**Absent**. The Project area is outside of the elevational range of this species.
Townsend's big-eared bat *(Corynorhinus townsendii)*	CSC	Occurs in a variety of habitats, but prefers cool, dark roost sites, and are often found in caves and mines. They roost in the open, hanging from walls and ceilings. Western populations typically forage on moths in areas of dense foliage.	**Possible**. Suitable foraging habitat for this species exists within the project site. Suboptimal roosting habitat exists in the form of the oak trees within the Project site. The nearest recorded observations of this species occurred over 70 years ago.
tricolored blackbird *(Agelaius tricolor)*	CT, CSC	Nests colonially near fresh water in dense cattails or tules, or in thickets of riparian shrubs. Forages in grassland and cropland. Large colonies are often found on dairy farm forage fields.	**Likely**. Within the surveyed areas, nesting habitat would be considered marginal, at best. Foraging habitat in the form of grassland was present. 15 adult tricolored blackbirds were observed nesting around Castac Lake during a 2007 field survey (Dudek & USFWS, 2013). This species was also observed in the marshy area near lake in 1999, 2000, 2001, 2003, and 2004.

Species	Status	Habitat	Occurrence on Project Site
			Nesting was observed near the lake in 2005, as well. Suitable foraging habitat for this species has been modeled directly adjacent to the Project site on the east side of I-5.
two-striped gartersnake *(Thamnophis hammondii)*	CSC	Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	**Absent**. The Project area lacks permanent freshwater bodies, and therefore is unsuitable for this species. The nearest recorded observation of this species was recorded in 1983 approximately 1.5 miles southeast of the Project site.
vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	Occupies vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	**Unlikely.** No vernal pools were observed within the surveyed portions of the Project site. The area surrounding Castac Lake could potentially serve as marginal habitat for this species in wet years. The only nearby recorded observation of this species was made in 1989 approximately 13 miles southwest of the Project site.
western pond turtle (*Emys marmorata*)	CSC	An aquatic turtle of ponds, marshes, slow-moving rivers, streams, and irrigation ditches with riparian vegetation. Requires adequate basking sites and sandy banks or grassy open fields to deposit eggs.	**Possible.** This species has been recently observed near Quail pond, approximately 5 miles east of FMHS. Although suitable aquatic habitat was not observed within the surveyed areas, this species could potentially occur within intermittent drainages, ditches, and even artificial waterbodies, such as ponding basins or water treatment facilities near the Project. Upland habitat in the form of riparian woodland is present in the vicinity, and this highly mobile could potentially pass through Project areas during dispersal or mating movements.
western spadefoot (*Spea hammondii*)	CSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools or temporary wetlands, lasting a minimum of three weeks, which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	**Unlikely**. The Project is outside of accepted distribution range of this species. No vernal pools were observed within the surveyed portions of the Project site. Focused surveys for this species conducted in 2007 within the TUMSHCP area, although suitable habitat has been modeled for this species around Castac Lake and along Cuddy Creek, directly adjacent to the Lebec Well 04 Site and associated pipeline alignment (Dudek & USFWS, 2013). Herpetological surveys conducted in 2011 found western spadefoot to be present within the northern portion of Tejon Ranch (Live Oak Associates, 2011), and there is a CNDDB record from 2013 of this species at the base of the foothills

Species	Status	Habitat	Occurrence on Project Site
			approximately 7 miles north of Castac Lake.
yellow warbler (*Setophaga petechia*)	CSC	Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders. Also nests in montane shrubbery in open conifer forests in the Cascades and Sierra Nevada ranges.	**Possible.** There are two nesting occurrences recorded approximately 3 miles south of Castac Lake. Suitable nesting habitat was not observed within surveyed areas, but this species could pass through the Project site.
yellow-blotched salamander (*Ensatina eschscholtzii croceater*)	CWL	Found in evergreen and deciduous forests, under rocks, logs, and other debris. Shaded north-facing areas seem to be favored, especially near creeks or streams.	**Possible.** This species is known to occur within Tejon Ranch. Habitats observed within the surveyed areas were marginal, but suitable riparian oak-dominated habitats were observed within 1 mile of the Project site.

Table 2. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity

Species	Status	Habitat	Occurrence on Project Site
Abrams' oxytheca (*Acanthoscyphus parishii var. abramsii*)	CNPS 1B	This chaparral species is found in shale and sandy substrate in the Transverse Mountain range. Grows at elevations between 5577 feet and 6562 feet. Blooms June – August.	**Absent**. This species occurs at higher elevations, approximately 10 miles west of the Project area in Los Padres National Forest. Chaparral habitat was absent from the surveyed Project areas, and the Project is below the accepted altitudinal range of this species.
Baja navarretia (*Navarretia peninsularis*)	CNPS 1B	Found in woodlands, chaparral, meadows, and seeps throughout southern California. This species is equally likely to occur in wetlands and non-wetlands, at elevations between 4593 feet and 7546 feet. Blooms June – August.	**Unlikely**. The Project area is below or near the accepted lower altitudinal range of this species. Suitable habitat for this species was not observed within the surveyed areas. This species is known to occur within Frazier Mountain and Lockwood Valley in Los Padres National Forest, approximately 6 miles west of FMHS and within oak woodland in Oso Canyon, approximately 5 miles southeast of Castac Lake (CNDDB, 2020).
Bakersfield cactus (*Opuntia basilaris var. treleasei*)	CNPS 1B, FE, CE	Found in chenopod shrublands, valley and foothill grasslands, cismontane woodlands where the Transverse range, Coastal range, Sierra Nevada range, and Mojave Desert meet. This species grows in coarse or cobbly well-drained granitic sand at elevations between 275 feet and 1800 feet. Blooms March – April.	**Absent**. The Project area is outside of the accepted native range and altitudinal range of this species.
Big Bear Valley woollypod (*Astragalus leucolobus*)	CNPS 1B	Found in the Mojave Desert and Transverse Mountain range in woodland, forest, and plains habitats. Often associated with pine woods and sagebrush and grows at elevations between 3600 feet and 9500 feet. Blooms May – July.	**Possible**. Suitable gravelly soils and sagebrush habitats were present within the Project area. Historically, this species was understood to occur within the San Gabriel Mountains and the San Bernardino Mountains, more than 70 miles southeast of the Project; however, there is a current (2013) observation of a population adjacent to I-5 approximately 3 miles south of Castac Lake (CNDDB, 2020). Comments accompanying this observation state that this could potentially represent a misidentification and should be verified.
calico monkeyflower *(Diplacus pictus / Mimulus pictus / Eunanus pictus)*	CNPS 1B	Found in the Sierra Nevada foothills and the Tehachapi mountains in bare, sunny, shrubby areas, and around granite outcrops within foothill woodland communities at elevations between 450 feet and 4100 feet. Blooms March – May.	**Possible**. There are several recorded observations of this species within Tejon Ranch, the nearest located approximately 5 miles northeast of the Lebec Well 04 site. Although granite outcrops were not observed within surveyed areas, marginal habitat was present in the form of shrubland with gravelly soils, dry desert washes, and rocky ephemeral creek beds.

Species	Status	Habitat	Occurrence on Project Site
California Orcutt grass (*Orcuttia californica*)	FE	Found throughout coastal southern California in the Transverse Ranges, San Gabriel mountains, Peninsular Ranges, and the San Jacinto Mountains. Grows in vernal pool habitats at elevations below 2295 feet. Blooms April – August.	**Absent**. The Project is located above the accepted altitudinal range of this species. Suitable vernal pool habitat was not observed within the surveyed areas.
Davidson's bush-mallow (*Malacothamnus davidsonii*)	CNPS 1B	Found in the coast ranges, Transverse range, and Peninsular range in primarily dry chaparral, woodland, and scrub habitats, but occasionally in wetlands. Grows in sandy soils at elevations between 500 and 5000 feet. Blooms May – July.	**Possible**. There are historic (1962 and prior) records of this species within Los Padres National Forest, approximately 17 miles southwest and 20 miles west of FMHS. Suitable habitat in the form of sagebrush scrub and sandy washes were observed within the surveyed areas.
delicate bluecup (*Githopsis tenella*)	CNPS 1B	Found in foothill areas surrounding the San Joaquin Valley, growing in mesic sites. Habitats include chaparral and cismontane woodlands at elevations between 3610 feet and 6233 feet. Blooms May – June.	**Unlikely**. Suitable habitat was not observed within the surveyed areas. The only recorded observation of this species in the vicinity of the Project occurred over 50 years ago approximately 13 miles northeast of the Project site.
Fort Tejon woolly sunflower (*Eriophyllum lanatum var. hallii*)	CNPS 1B	Occurs in the Coastal and Transverse ranges in woodland and chaparral habitats. Grows in loamy soils on slopes at elevations between 3937 and 4921 feet. Blooms June – July.	**Likely**. A focused survey of this species near the east side of the Project area in 2007 resulted in 36 occurrences of this species, primarily located at elevations between 3,600 and 5,000 feet (Dudek & USFWS, 2013). This species has also been observed near Fort Tejon State Historic Park.
Greata's aster (*Symphyotrichum greatae*)	CNPS 1B	Occurs in a variety of woodland, forested and chaparral habitats in south western California. Often found in mesic canyons and grows at elevations between 985 and 6,560 feet. Blooms August – October.	**Unlikely**. Suitable habitat was not observed within the surveyed areas. The only recorded observation of this species in the vicinity of the project site occurred approximately 19 miles southeast and 1,000 feet in elevation below of the Project site.
grey-leaved violet (*Viola pinetorum ssp. grisea*)	CNPS 1B	Found in the Sierra Nevada range as well as areas of interior southern California. Grows in subalpine forested areas, meadows, and seeps at elevations between 5,200 and 12,140 feet. Blooms June – July.	**Absent**. Suitable habitat was not observed within surveyed areas, and the Project is below the accepted lower altitudinal range of this species.
Horn's milk-vetch *(Astralagus hornii var. hornii)*	CNPS 1B	This facultative species is most frequently found in the San Joaquin Valley and Sierra Nevada foothills in the alkali soils of lake margins, meadows, seeps, and playas at elevations between 196 feet and 1,150 feet. Blooms May – September.	**Unlikely**. Although there is a historic (1863) observation of this species within Fort Tejon, the Project area is above the accepted upper altitudinal range of this species

Species	Status	Habitat	Occurrence on Project Site
Kern mallow *(Eremalche parryi ssp. kernensis)*	CNPS 1B, FE	Occurs in the San Joaquin Valley and the Inner South Coast Ranges in eroded hillsides and alkali flats in shadescale scrub and valley grassland communities at elevations between 325 feet and 3275 feet. Blooms March – May.	**Absent**. The Project is located outside of the accepted native range of this species.
Lemmon's jewelflower (*Caulanthus lemmonii*)	CNPS 1B	Grows in the Coastal range and Mojave woodlands and grasslands at elevations between 260 and 3,610 feet. Often associated with pinyon pines and junipers. Blooms March – May.	**Possible**. Suitable habitat in the form of grassland was observed within surveyed areas. There is a recent (2015) observation of this species within Los Padres National Forest, along Frazier Mountain Park Road, approximately 3 miles west of the Project.
Lost Hills crownscale *(Atriplex coronata var. vallicola)*	CNPS 1B	Found in the San Joaquin Valley in chenopod scrub, valley and foothill grassland, and vernal pools at elevations below 1400 feet. Typically found in dried ponds on alkaline soils. Blooms April – September.	**Absent**. The Project area is below the lower altitudinal range of this species.
Madera leptosiphon (*Leptosiphon serrulatus*)	CNPS 1B	Found in openings in foothill woodland, often yellow-pine forest, and chaparral at elevations between 1000 feet and 4300 feet. Blooms April – May.	**Absent.** Suitable habitat was not observed within the surveyed areas. The only nearby recorded observation of this species is part of a historical collection, mapped approximately 11 miles northeast of the Project site.
Mt. Gleason paintbrush (*Castilleja gleasoni*)	CR, CNPS 1B	Occurs exclusively in the lower montane areas of the San Gabriel Mountains in chaparral and woodland habitats. Grows in granitic soils on open flats as well as slopes at elevations between 3610 feet and 7218 feet. Blooms May – June.	**Absent.** Suitable habitat was not observed within the surveyed areas. The Project is located outside of the accepted native range of this species.
Mt. Pinos onion (*Allium howellii var. clokeyi*)	CNPS 1B	Generally found in the Transverse and Coastal ranges growing at elevations between 4264 and 6070 feet. Associated with a variety of habitats including Great Basin scrub, pinyon and juniper woodlands, and meadows and seeps. Blooms May – June.	Possible. This species is known to occur within Frazier Mountain in the Los Padres National Forest. There are several recorded observations along Frazier Mountain Park Road and Lockwood Valley Road, the nearest of which is located approximately 2 miles west of the Project area along Frazier Mountain Park Road. Suitable sagebrush scrub habitat was observed within the surveyed areas.
pale-yellow layia *(Layia heterotricha)*	CNPS 1B	Found in the coastal ranges, Transverse range, and occasionally on the San Joaquin valley floor in a variety of habitats including juniper woodlands, coastal shrublands, and foothill grasslands. Grows at elevations between 656 – 5905 feet. Blooms April – June.	Possible. Suitable grassland and sagebrush scrub habitat were observed within Project areas. There are several recorded observations along Frazier Mountain Park Road and Lockwood Valley Road, the nearest of which is located approximately 5.5 miles west of the Project area along Frazier Mountain Park Road. This species is also known to occur within the Tehachapi Mountains,

Species	Status	Habitat	Occurrence on Project Site
			with multiple observations in a region approximately 30 miles northeast of Castac Lake.
Palmer's mariposa-lily (*Calochortus palmeri var. palmeri*)	CNPS 1B	Found throughout southwestern California, primarily in wetland habitats, but occasionally in non-wetland habitats, including woodlands and shrublands. Grows at elevations between 3937 and 7218 feet. Blooms May – July.	Possible. Multiple observations of this species have been made in the vicinity of the Project. This species is known to occur on Frazier Mountain in Los Padres National Forest and within Tejon Ranch. Several of the recorded observations are current (within the last 25 years), and there is one historic (1964) observation reported at a location described as "0.5 mile south of Lebec" (CNDDB, 2020). Suitable habitat for this species is present within the Project area.
Piute Mountains navarretia (*Navarretia setiloba*)	CNPS 1B	Occurs in the Sierra Nevada foothills, San Joaquin Valley, and the Western Transverse Ranges in woodlands and grasslands at elevations between 590 and 6890 feet. Grows in red clay soils or gravelly loam. Blooms April – July.	**Possible.** This species is known to occur within Tejon Ranch. Marginally suitable habitat and gravelly loamy soils were observed within the surveyed areas.
Robbins' nemacladus (*Nemacladus secundiflorus var. robbinsii*)	CNPS 1B	Occurs on dry, sandy, or gravelly slopes in opening in woodland and grassland habitats at elevations between 1180 – 5610 feet. Blooms April – May.	**Possible.** Suitable habitat was observed on the slopes surrounding FMHS. There are historic records of this species within Hungry Valley SVRA and Los Padres National Forest in the vicinity of the Project.
salt spring checkerbloom (*Sidalcea neomexicana*)	CNPS 2B	Occurs in alkali springs and marshes in chaparral, coastal scrub, lower montane coniferous forest, and Mojavean desert scrub at elevations between 50 – 7,800 feet. Blooms March – June.	**Possible.** Suitable habitat was not observed within surveyed areas. However, this species has been recorded within Los Padres National Forest west of the Project and suitable habitat could potentially be present within the area.
San Bernardino aster (*Symphyotrichum defoliatum*)	CNPS 1B	Occurs in meadows, seeps, marshes, and vernally mesic grasslands near ditches; often in disturbed areas at elevations below 6725 feet. Blooms July – November.	**Possible.** Suitable habitat was observed within the surveyed areas. There are recorded observations of this species on Frazier Mountain in los Padres National Forest, west of the Project.
short-joint beavertail (*Opuntia basilaris var. brachyclada*)	CNPS 1B	This perennial stem succulent occurs in sandy soil or course granitic loam in chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon-juniper woodland habitats at elevations between 1400 – 6600 feet. Blooms April – June.	**Possible.** Marginal habitat was observed in the surveyed areas around FMHS. This species is known to occur in Hungry Valley SVRA, approximately 5 miles southeast of FMHS.

Species	Status	Habitat	Occurrence on Project Site
slender mariposa-lily (*Calochortus clavatus var. gracilis*)	CNPS 1B	This species occurs in shaded foothill canyons in chaparral, coastal scrub, and grassland habitats at elevations below 6,000 feet. Blooms May – June.	**Possible.** Typical **s**uitable habitat was not observed within surveyed areas. However, this species has been well documented in a region approximately 10 miles southeast of FMHS and suitable habitat could potentially be present within the Project area.
spreading navarretia (*Navarretia fossalis*)	FT	This obligate species occurs in the Mojave, the Central Coast, and throughout coastal southern California. Found in habitats with standing water, including vernal pools, growing at elevations between 985 and 4265 feet. Blooms April – June.	**Absent**. The Project is located outside of the accepted native range of this species, and suitable habitat was not observed within the surveyed areas.
Tehachapi buckwheat (*Eriogonum callistum*)	CNPS 1B	This species occurs on rocky limestone substrate in opening in chaparral habitat at elevations between 4500 – 6000 feet. Blooms May – July.	**Unlikely.** This species has been well documented within Tejon Ranch east of the Project. However, the Project areas are at or near the lower altitudinal range of this species, and suitable habitat was not observed within surveyed areas.
Tehachapi monardella (*Monardella linoides ssp. oblonga*)	CNPS 1B	Found on dry slopes and in granitic soils within montane coniferous forest and pinyon-juniper woodland habitats at elevations between 4700 – 8700 feet. Blooms June – August.	**Unlikely.** This species has been well documented in the vicinity of the Project. However, the Project areas are at or near the lower altitudinal range of this species, and suitable habitat was not observed within surveyed areas.
Tejon poppy *(Eschscholzia lemmonii ssp. kernensis)*	CNPS 1B	Occurs in the grasslands of the southern portion of the San Joaquin valley and the foothills of the Transverse mountain range. Found in elevations between 440 feet and 4,500 feet. Blooms March – April.	**Unlikely**. The Project area appears to be at or near the upper altitudinal range of this species and just south of the accepted native range. Fort Tejon State Historic Park, located approximately 3 miles north of the Project, represents the southernmost recorded observation. A focused survey for this species in 2007 and floristic surveys conducted between 2003 and 2006 within the Tejon Mountain Village Plan area resulted in no observations of this species (Dudek & USFWS, 2013).
Tracy's eriastrum (*Eriastrum tracyi*)	CR	Often found in open sections of chaparral, woodland, and valley-foothill grassland habitats. Grows in gravelly shale or clay at elevations between 1,035 and 7,875 feet. Blooms May – August.	**Possible**. This species is known to occur within Tejon Ranch near Castac Lake. Marginal habitat for this species was observed within the surveyed areas.

EXPLANATION OF OCCURRENCE DESIGNATIONS AND STATUS CODES

Present:	Species observed on the site at time of field surveys or during recent past
Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis
Possible:	Species not observed on the site, but it could occur there from time to time
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient
Absent:	Species not observed on the site, and precluded from occurring there due to absence of suitable habitat

STATUS CODES

FE	Federally Endangered
FT	Federally Threatened
FPE	Federally Endangered (Proposed)
FPT	Federally Threatened (Proposed)
FC	Federal Candidate
CE	California Endangered
CT	California Threatened
CCT	California Threatened (Candidate)
CFP	California Fully Protected
CSC	California Species of Concern
CWL	California Watch List
CCE	California Endangered (Candidate)
CR	California Rare

CNPS LISTING

1A	Plants Presumed Extinct in California
1B	Plants Rare, Threatened, or Endangered in California and elsewhere
2A	Plants Presumed Extirpated in California, but more common elsewhere
2B	Plants Rare, Threatened, or Endangered in California, but more common elsewhere

3 Impacts and Mitigation

3.1 Significance Criteria

3.1.1 CEQA

General plans, area plans, and specific projects are subject to the provisions of CEQA. The purpose of CEQA is to assess the impacts of proposed projects on the environment prior to project approval and implementation. Impacts to biological resources are just one type of environmental impact assessed under CEQA and vary from project to project in terms of location, scope, and magnitude. Projects requiring removal of vegetation may result in the mortality or displacement of animals associated with that vegetation. Animals adapted to humans, roads, buildings, and pets may replace those species formerly occurring on a site. Plants and animals that are state and/or federally listed as threatened or endangered may be injured, killed, or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. Such impacts may be considered either "significant" or "less than significant" under CEQA. According to Public Resources Code 21068, "significant effect on the environment" means a substantial, or potentially substantial, adverse change in the environment." Project-specific project to biological resources may be considered "significant" if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined in Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make a "mandatory finding of significance" if the project has 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, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory."

3.1.2 NEPA

Projects located on federal lands or receiving federal funding are subject to the provisions of NEPA. The purpose of NEPA is to identify the adverse, beneficial, or neutral effects of a proposed action on the human environment, assess the significance of those effects, and recommend measures, that if implemented, would mitigate adverse effects. As used in NEPA, a determination that certain effects on the human environment are "significant" requires considerations of both context and intensity (40 CFR 1508.27).

Context means that the significance of an action must be analyzed in terms of the affected environment in which a proposed action would occur. For the purposes of assessing effects of an action on biological resources, the relevant context is often local, which means the analysis requires a comparison of the action area's biological resources to the biological resources of the local area. However, the analysis may also require a comparison of the action area's biological resources with the biological resources of an entire region.

Intensity refers to the severity of impact. In considering intensity of impact to biological resources, it is necessary to address the unique qualities of wetlands and ecologically critical areas that may be beneficially or adversely affected, the degree to which the action will be controversial, the degree to which the effects will be controversial, the degree to which the effects will be uncertain, the degree to which the action will establish a precedent for future actions with potentially significant effects, and the potential for the action to result in cumulatively significant effects.

The effects of an action on certain biological resources are generally considered to be "significant." An action that adversely affects federally listed threatened or endangered species, waters of the United States, or migratory movements of fish and wildlife are some examples of significant effects.

NEPA requires disclosure of feasible mitigation measures for the effects of an action on the environment. Suitable measures include the following:

- Avoidance of the effect by not taking a certain action or parts of an action;
- Mitigation of the effect by limiting the degree or magnitude of the action and its implementation;
- Rectifying the effect by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the effect over time by preservation and maintenance operations throughout the life of the action; and
- Compensating for the effect by replacing or providing substitute resources or environments.

This report identifies likely effects of an action, identifies those that may be considered significant pursuant to the provisions of NEPA, and provides mitigation measures to avoid adverse effects to biological resources.

3.2 Relevant Goals, Policies, and Laws

3.2.1 Kern County General Plan

The Kern County General Plan sets forth the following goals and policies that protect biological resources and which have potential relevance to the Project:

1.10.5 Threatened and Endangered Species

Policies

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

28. County should work closely with State and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.

32. Riparian areas will be managed in accordance with United States Army Corps of Engineers, and the California Department of Fish and [Wildlife] rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.

Implementation Measures

Q. Discretionary projects shall consider effects to biological resources as required by the California Environmental Quality Act.

R. Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to the California Environmental Quality Act.

1.10.6 Surface Water and Groundwater

Policies

43. Drainage shall conform to the Kern County Development Standards and the Grading Ordinance.

44. Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practical.

1.10.10 Oak Tree Conservation

Policies

65. Oak woodlands and large oak trees shall be protected where possible and incorporated into project developments.

Implementation Measures

LL. The following applies to development of parcels having oak tree canopy cover of less than 10 percent but containing individual oak trees equal to or greater than a 12-inch diameter trunk at 4.5 feet breast height.

a. Such trees shall be identified on plot plans.
b. Discretionary development shall avoid the area beneath and within the trees unaltered drip line unless approved by a licensed or certified arborist or botanist.
c. Specified tree removal related to the discretionary action may be granted by the decision-making body upon showing that a hardship exists based on substantial evidence in the record.

3.2.2 Los Angeles County General Plan 2035

A portion of the proposed alignment south of Frazier Mountain Park Road runs through northern Los Angeles County, and therefore could be subject to relevant goals and policies of the Los Angeles County General Plan, listed below.

Goal C/NR 3: Permanent sustainable preservation of genetically and physically diverse biological resources and ecological systems including: habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands, alpine habitat, chaparral, shrublands, and SEAs.

Policy C/NR 3.1: Conserve and enhance the ecological function of diverse natural habitats and biological resources.

Policy C/NR 3.3: Restore upland communities and significant riparian resources, such as degraded streams, rivers, and wetlands to maintain ecological function- acknowledging the importance of incrementally restoring ecosystem values when complete restoration is not feasible.

Policy C/NR 3.7: Participate in inter-jurisdictional collaborative strategies that protect biological resources.

Policy C/NR 3.11: Discourage development in riparian habitats, streambed, wetlands, and other native woodlands in order to maintain and support their preservation in a natural state, unaltered by grading, fill, or diversion activities.

Policy C/NR 13.5: Encourage required grading to be compatible with the existing terrain.

3.2.3 Antelope Valley Area Plan

The portion of the Project in Los Angeles County falls within the Antelope Valley Area Plan area and could be subject to relevant goals and policies, listed below.

Goal COS 4: Sensitive habitats and species are protected to promote biodiversity.

Policy COS 4.5: Subject to local, state, or federal laws, require new development to provide adequate buffers from preserves, sanctuaries, habitat areas, wildlife corridors, State Parks, and National Forest lands, except within Economic Opportunity Areas.

Policy COS 4.7: Restrict fencing in wildlife corridors. Where fencing is necessary for privacy or safety, require appropriate development standards that maximize opportunities for wildlife movement.

Policy COS 4.8: Ensure ongoing habitat preservation by coordinating with the California Department of Fish and [Wildlife] to obtain the latest information regarding threatened and endangered species.

Policy COS 4.9: Ensure water bodies are well-maintained to protect habitat areas and provide water to local species.

Policy 4.10: Restrict development that would reduce the size of water bodies, minimizing the potential for loss of habitat and water supply.

Goal COS 16: Native vegetation thrives throughout Antelope Valley, reducing erosion, flooding, and wind-borne dust and sand.

Policy COS 16.1: Except within Economic Opportunity Areas, require new development to minimize removal of native vegetation. Discourage the clear-scraping of land to ensure that a large percentage of land is left in its natural state.

3.2.4 Los Angeles County Oak Woodlands Conservation Management Plan Guide

Pursuant to the California Oak Woodlands Conservation Act (AB 242), Los Angeles County developed an Oak Woodlands Conservation Management Plan (Plan) to ensure no net loss of existing oak woodlands. Discretionary projects with two or more oak trees with diameters of at least five inches are subject to the provisions of the Plan requirements. Furthermore, site maps submitted as part of the review process are required to include oak trees within 200 feet of the Project in order to ensure there is no impact to oak woodlands in the vicinity.

3.2.5 Los Angeles County Oak Tree Ordinance

The Los Angeles County Oak Tree Ordinance (Section 22.56.2050) applies to all unincorporated areas of the County. Under this ordinance, a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any tree in the oak tree genus without first obtaining a permit. The protected zone is defined in the ordinance as "that area within the dripline of an oak tree and extending therefrom to a point at least five feet outside of the dripline, or 15 feet from the trunks of a tree, whichever distance is greater." When applying for a permit, the applicant is required to provide a map illustrating "the location of all oak trees subject to this [ordinance] proposed to be removed, damaged, encroached, relocated, or within 200 feet of

proposed construction, grading, landfill, or other activity." The lead agency should consult with Los Angeles County to ascertain whether a permit is required.

3.2.6 Frazier Park/Lebec Specific Plan

The Frazier Park/Lebec Specific Plan sets forth the following goals and policies that protect biological resources and which have potential relevance to the Project:

Objective 3.1.A.2: Preserve open spaces, scenic vistas, water resources, watersheds and wildlife habitats in their natural form to the greatest extent possible.

Goal 3.1.B: Prevent further erosion from occurring within and adjacent to the Cuddy Creek and restore the stream channel to its natural state.

Policies

- Development shall occur in such a manner as to encourage compatibility and protection of any threatened or endangered species and biologically sensitive habitat consistent with permits or policies in effect at the time of development in the Plan Area.
- Grading plans shall require:
    - Grading shall be restricted to slopes of less than 30 percent;
    - Retain natural vegetation on undeveloped portions of property and incorporate in landscaping when practicable. All vegetation that is removed shall be replaced after completion of development to prevent erosion and ensure soil stability. Sites shall be replanted with vegetation within 30 days of occupancy.

3.2.7 Tejon Mountain Village Specific and Community Plan

The Tejon Mountain Village Specific and Community Plan sets forth the following goals and policies that protect biological resources and which have potential relevance to the Project:

- Create an open space and conservation plan that effectively manages the interface between low impact development, open space, ranching activities and the Condor Study Area located off-site, adjacent to the north of the Specific Plan Area identified in the Tehachapi Uplands Multi-Species Habitat Conservation Plan.
- Promote the conservation of oak tree woodlands for their environmental value and scenic beauty.
- Protect oak woodlands and individual oak trees and incorporate into project development, where possible.

3.2.8 Tehachapi Upland Multiple Species Habitat Conservation Plan

On April 30, 2012, USFWS issued an Incidental Take Permit (ITP) under the Endangered Species Act in conjunction with the Tehachapi Upland Multiple Species Habitat Conservation Plan (TUMSHCP) for covered lands within Tejon Ranch, including the Project's Lebec Well 04 Site and associated pipelines within the Tejon Mountain Village Plan Area. The Lebec Well 04 Site is located within a region of Tejon Mountain Village (TMV) designated for development, per the Ranch-Wide Agreement; however, it is within "covered lands" and still subject to all of the provisions of the TUMSHCP.

The construction of a groundwater well does not appear to be considered a Plan-Wide Activity under the existing permit. Section 2.2.1 of the TUMSHCP discusses types of covered activities and states, "water diversions on Covered Lands are limited by the Ranchwide Agreement and the TUMSHCP, so that there will be no significant expansion of surface or groundwater extraction practices as of June 17, 2008, the date of the Ranchwide Agreement" (TUMSHCP, 2013). The TUMSHCP permit specifically covers the Tejon-Castac Water District, through a certificate of inclusion, for 16 acres used for operations and expansion of water infrastructure on a parcel owned by the Department of Water Resources (DWR). Section 2.2.3 of the TUMSHCP states that commercial and residential development within the designated TMV and

Lebec/Existing Headquarters Areas are considered Covered Activities under the existing permit, but "actual development would likely proceed as separate projects with individual entitlement and permit requirements, and project-specific permit applications and mitigation plans." (TUMSHCP, 2013).

Section 2.2.4 of the TUMSHCP states that the ITP applies strictly to Tejon Ranch Conservancy (TRC); however, third party entities, such as utilities, developers not associated with TRC, and other companies that may be engaging in short-term construction or other ground disturbing activities associated with a Covered Activity, may apply for a certificate of inclusion from TRC. "Upon becoming an included entity, a third party would be required to perform all actions that constitute or fall within, the specified Covered Activity or on the acquired Covered Lands in accordance with the applicable provisions of the TUMSHCP, Implementing Agreement, and ITP." (TUMSHCP, 2013).

The TUMSHCP contains numerous measures to avoid and minimize impacts to the California condor resulting from plan-wide activities and residential and commercial development activities on Covered Lands. The following condor avoidance and minimization measures were taken from Chapter 4 of the TUMSHCP and have potential relevance to the proposed Project-related activities:

- TRC or an included entity will prepare condor educational materials and implement a training program, such as printed brochures or other media, that will include information concerning the life history of the California condor, where condors potentially occur within the TMV Planning Area, prohibited behaviors related to condors such as the pursuit, capture, and harassment of individual condors, and other potential direct interaction with condors. The information shall also identify types of microtrash that could be ingested by condors and describe measures to eliminate microtrash at and near all construction sites, recreational areas, outdoor filming projects, roads, and back-country areas where human presence occurs. The education program will include training of key personnel at TRC, appropriate signage at trailheads or entrances to open space areas, and dissemination of pertinent information at on-site nature centers and other public areas. The educational materials will be disseminated to film crews, TMV Project construction and work crews, residents, guests, and visitors, particularly those engaging in recreational activities that could put them in close proximity to condors. Project land managers will be empowered to take action to prevent any such activity that would pose a threat to condors. This measure will be included in implementation documentation as appropriate under the MOP (e.g., CC&Rs for commercial and residential development and contracts with third-party filming entities).
- The following condor protection measures shall be implemented and documented as appropriate under the MOP (e.g., CC&Rs for commercial and residential development and contracts with third-party filming entities):
    - Master Developer's Construction Crews—All construction contracts let by the Master Developer shall include provisions requiring the general and subcontractors to provide construction workers with educational materials describing condor protection measures.
    - Residential or Commercial Construction Crews—All land sale contracts issued by the Master Developer shall include provisions requiring future residential and commercial property owners to provide construction workers with educational materials describing condor protection measures.
- TRC or an included entity will ensure that routine community maintenance activities include regular efforts to eliminate microtrash at and near all work sites, recreational events, filming projects, roads, and back-country areas where human presence occurs. All trash receptacles will be fitted with animal- and weather-resistant lids, will be regularly emptied, and will regularly be inspected by the USFWS-approved Tejon Staff Biologist. This measure will be included in implementation documentation as appropriate under the MOP (e.g., CC&Rs for commercial and residential development and contracts with third-party filming entities). The CC&Rs will include provisions authorizing the Master and Commercial Maintenance Associations, as relevant, to promulgate from time to time rules and regulations recommended by the USFWS-approved Tejon Staff Biologist to address microtrash and trash receptacles and to enforce such rules and regulations, which shall be consistent with and no less stringent than the conservation measures.

- A condor educational curriculum, as provided above, will be created and disseminated that will include information concerning prohibited behaviors related to condors, such as the pursuit, capture, harassment, and all other potential direct interaction of the species.
- Construction workers, filming crews, TRC staff, and residential and commercial occupants and their guests will be required to cease any behavior which constitutes an attractive nuisance or otherwise presents an unreasonable and avoidable danger to California condors upon direction by TRC and in coordination with the USFWS-approved Tejon Staff Biologist. Pursuant to the MOP, documentation describing this prohibition will not list such behaviors in detail, but will provide examples and authorize the USFWS-approved Tejon Staff Biologist, in consultation with USFWS, to respond to changing California condor behaviors, human activities, and other conditions with whatever restrictions necessary to provide the protection intended.

Chapter 5 of the TUMSHCP discusses other special status species with potential to occur onsite and includes maps of modeled areas of suitable habitat for these species. Chapter 7 describes required measures to avoid, minimize, and/or mitigate impacts to special status species with potential to occur within plan area. Only those species determined by the TUMSHCP to have potential to occur within the Project area are discussed below.

The following goals and objectives were taken from Chapter 7 of the TUMSHCP and may have potential relevance to the Project:

- Best management practices (BMPs) will be implemented to protect surface water quality (pollutants, erosion, dust control, sedimentation), as required by applicable Clean Water Act and Porter-Cologne requirements, and air district requirements.
- Disturbance/grading perimeters will be flagged or fenced to limit construction activities to designated areas and avoid unauthorized incursions into adjacent areas.
- Contractor/construction personnel will complete meetings for training on TUMSHCP compliance and recognition/reporting protocols for Covered Species prior to grading.
- Surveys prior to grading will be conducted in suitable habitat (for Tehachapi slender salamander). The project biologist will make reasonable efforts to capture and relocate any observed individuals to suitable habitat (e.g., on north-facing slopes containing talus) that is the closest distance to the disturbance area from where the individuals were removed. The project biologist conducting the capture and relocation of Tehachapi slender salamanders will have a Scientific Collecting Permit (SCP) and a Memorandum of Understanding (MOU) or letter permit from the California Department of Fish and Wildlife (CDFW) to carry out these activities.
- Prior to grading, activities in or immediately adjacent to suitable habitat will be monitored, including exclusion fencing, if appropriate, to prevent Tehachapi slender salamanders from entering construction zones.
- To ensure that diseases are not conveyed between work sites by the project biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibians Population Task Force (DAPTF 2009) will be followed at all times.
- Tejon Ranchcorp (TRC) guests, contractors and licensees, and visitors through the Public Access Plan will be provided with educational information regarding acceptable activities in open space areas, including recreational activities, pet restrictions, and wildlife restrictions, including prohibition on collecting individuals (Plan-Wide Activities).
- Surveys prior to grading will be conducted in suitable habitat (for western spadefoot). The project biologist will make reasonable efforts to capture and relocate any observed individual to suitable habitat that is the closest distance to the disturbance area from where the individuals were removed. If western spadefoots are detected (including egg mases. Larvae), activities will be avoided until larvae have metamorphosed. A 300-foot setback will be established from occupied area if work must continue in or immediately adjacent to sites with egg masses and/or larvae. The project biologist may reduce the 300-foot setback at his or her discretion depending on the suitability of site conditions. A western spadefoot toad relocation plan, which will include, at a minimum, the timing and methods for capturing and releasing adults, will be prepared prior to the initiation of grading activities. The relocation plan will be submitted to CDFW for review.

- Prior to grading, activities in or immediately adjacent to suitable habitat will be monitored, including exclusion fencing, if appropriate, to prevent western spadefoots from entering construction zones.
- Surveys prior to grading will be conducted in suitable habitat (for yellow-blotched salamander). The project biologist will make reasonable efforts to capture and relocate any observed individual to suitable habitat that is the closest distance to the disturbance area from where individuals were removed. A yellow-blotched salamander relocation plan, which will include, at a minimum, the timing and methods for capturing and releasing adults, will be prepared prior to the initiation of grading activities. The relocation plan will be submitted to CDFW for review.
- Prior to grading, activities in or immediately adjacent to suitable habitat will be monitored, including exclusion fencing, if appropriate, to prevent yellow-blotched salamanders from entering construction zones.
- Impacts to breeding American peregrine falcon individuals will be avoided, as will direct take of occupied nests, during construction activities for commercial and residential Covered Activities. All lethal take of American peregrine falcons will be avoided.
- Surveys prior to grading in suitable breeding habitat will be conducted during the breeding season (March through August) to determine if nesting American peregrine falcons are present.
- If active American peregrine falcon nests are detected during surveys prior to grading, a 0.25-mile protection zone will be established around each active nest and prohibit grading and land-altering activities within the 0.25-mile protection zone as long as the nest is active. Active nests and 0.25-mile protection zones will be mapped on appropriate planning maps. The 0.25-mile protection zone may be reduced at the discretion of the project biologist depending on site viewshed characteristics.
- The project biologist will monitor construction activities in suitable habitat to assure avoidance of any harm to individuals and will have the authority to direct the cessation of field activities likely to cause any such harm.
- Preferred diurnal perches and high-quality roost trees for bald eagle will be conserved to preserve productivity for bald eagles wintering in the area.
- Subject to Kern County Fire Department approval, removal of preferred diurnal perches and high-quality roost trees from fuel modification zones within 1 mile of Castac Lake, as identified by the project biologist, will be prohibited.
- Prior to grading, the project biologist will conduct focused surveys for wintering (October through March) bald eagles within the proposed project phase and, if present, their preferred diurnal perches and roosting areas will be mapped and avoided.
- Identified preferred roosting areas that are well-protected from wind (e.g., in a canyon or blocked by trees) will be preserved, including an adequate setback from preserved roosting areas. The setback will be determined by the project biologist using data collected during the focused surveys for wintering bald eagles, which will be conducted prior to the approval of the grading plan for each phase of development within 1 mile of the edge of Castac Lake. Between October 15 and March 15, uses within the roost areas and the setback will be limited to those approved by the project biologist but will exclude activities such as hunting (starting November 1 through March) and other recreational uses.
- Habitat disturbances in suitable foraging and wintering habitat for bald eagle that could result in direct disturbance or injury to individuals will be avoided during construction activities for commercial and residential Covered Activities. All lethal take of bald eagles will be avoided.
- The project biologist will conduct surveys prior to grading, will monitor construction activities in suitable foraging and wintering habitat (for bald eagle) to assure avoidance of any harm to individuals, and will have the authority to direct the cessation of field activities likely to cause any such harm.
- Maintain a minimum 300-foot setback from preferred diurnal perches and high-quality roost trees in the TMV Planning Area between October and March in order to limit human disturbance. The project biologist may reduce the 300-foot setback at his or her discretion depending on the suitability of site conditions.
- Direct impacts to breeding burrowing owls will be avoided, as will direct take of occupied nests, and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities, as well as fuel modification activities related to implementing any ground-disturbing fuel modification activities under the Fire Prevention Plan (FPP).

- Surveys prior to grading for burrowing owls will be conducted 30 days prior to scheduled construction activity in suitable habitat to determine if burrowing owls are present on site and, if present, their breeding status (breeding season is March through August).
- If non-nesting burrowing owls are observed on site, construction work will proceed after owls are evacuated from site using a CDFW-approved burrow closure procedure and after alternative burrow sites have been provided in accordance with CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Results of surveys and relocation efforts will be submitted to CDFW.
- If nesting burrowing owls are observed on site, construction work within 300 feet of active nest burrows will be delayed until fledglings have left or are independent of the nest, as determined by the project biologist. The project biologist may reduce the 300-foot setback at his or her discretion depending on the suitability of site conditions. Nests that become active within designated construction zones after initiation of construction will be avoided (i.e., active nests would not be directly disturbed), and an appropriate setback will be provided as required by the project biologist consistent with the Staff Report on Burrowing Owl Mitigation (CDFG 2012). Results of survey and avoidance of nesting burrowing owl will be submitted to CDFW.
- All active golden eagle nest sites will be conserved.
- For commercial and residential Covered Activities, active primary golden eagle nest sites and active alternate nest sites observed prior to approval of the grading plan for each phase of development in the Covered Lands will be conserved.
- To preserve eagle territory integrity, inadvertent habitat disturbances to modeled primary breeding, breeding/foraging, and foraging habitat for golden eagle, and direct disturbance or injury to individuals, will be avoided, and indirect habitat effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities. All lethal take of golden eagles will be avoided.
- Avoidance/minimization measures will be implemented adjacent to modeled primary breeding, breeding/foraging, and foraging habitat for golden eagle, including fencing/flagging of disturbance/grading perimeters, dust control, contractor/construction personnel meetings prior to grading, and biological monitoring.
- Direct impacts to active primary golden eagle nests and active alternate nests and direct disturbance or injury to individuals during construction activities will be avoided, and indirect habitat effects that cannot be avoided will be minimized to the extent practicable for Covered Activities; all lethal take will be avoided.
- Surveys for active primary golden eagle nests and active alternate nests will be conducted during the breeding season (January through August) prior to approval of the backbone infrastructure grading plan (so as to assist in the constraints planning effort for potential development sites) for each phase of development in modeled primary breeding and breeding/foraging habitat.
- If active golden eagle nest sites (primary and/or alternate) are observed on site during the survey, a nest-specific analysis will be prepared to identify the primary nest and establish its viewshed (the "Viewshed"). Because golden eagles typically build primary and alternate nests in relative close proximity to each other, often within the same tree groves, active alternate nest sites will generally be protected by the same viewshed analysis as applied to the primary nest site. A complete viewshed analysis will be conducted for the primary nests determined to be in active use, and the following standards to avoid/minimize disturbance to active nests will apply:
    - No development, new trails, or recreational activities will occur within 0.25 mile of an active golden eagle nest, within or outside of the Viewshed.
    - No development will occur within the Viewshed that is also within 0.5 mile of an active nest.
- The project biologist will monitor construction activities in suitable breeding and breeding/foraging habitat to assure avoidance of any harm to individuals and will have the authority to direct the cessation of field activities likely to cause any such harm.
- Impacts to breeding least Bell's vireos during construction activities for commercial and residential Covered Activities will be avoided, as will direct take of occupied nests, and effects that cannot be avoided will be minimized to the extent practicable.

- Nesting bird surveys for breeding least Bell's vireo will be conducted, pursuant to accepted protocol for this species, prior to grading for construction activities that would occur in or immediately adjacent to suitable breeding/foraging habitat scheduled for the breeding season (March 15 through September 15) of this species. The results of the surveys will be submitted to CDFW.
- If breeding least Bell's vireos are observed on site, construction activities will be avoided during the breeding season, or, if construction must take place during the breeding season, a 500-foot no disturbance buffer will be established around active nests. CDFW will be consulted regarding any variance to this buffer distance. The buffer will be maintained until young have fledged and are no longer dependent on the nest or nest territory.
- Habitat disturbances in modeled breeding/foraging habitat for purple martin will be avoided and effects to modeled habitat that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Impacts to breeding purple martin will be avoided, as will direct take of occupied nests, and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Surveys for breeding purple martin will be conducted during the breeding season (April through August) for construction activities within suitable breeding/foraging habitat scheduled for the breeding season.
- If breeding purple martins are observed in the project disturbance zone or within 500 feet of the disturbance zone, construction activities will be avoided within 500 feet of the breeding location during the breeding season (April through August).
- Impacts to breeding southwestern willow flycatchers will be avoided, as will direct take of occupied nests, and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Nesting bird surveys for breeding southwestern willow flycatcher will be conducted, pursuant to accepted protocols for this species, prior to grading for construction activities that would occur in or immediately adjacent to suitable breeding/foraging habitat and that are scheduled to occur during the breeding season (May 1 through September 15) for this species. The results of the surveys will be submitted to CDFW.
- If breeding southwestern willow flycatchers are observed on site, construction activities will be avoided during the breeding season, or, if construction must take place during the breeding season, a 500-foot no disturbance buffer will be established around active nests. CDFW will be consulted regarding any variance to this buffer distance. The buffer will be maintained until young have fledged and are no longer dependent on the nest or nest territory.
- Habitat disturbances in modeled primary breeding and foraging habitat within riparian and wetland areas for tricolored blackbird will be avoided and effects to modeled habitat that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Impacts to breeding tricolored blackbirds will be avoided, as will direct take of occupied nests, and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Surveys for breeding tricolored blackbird will be conducted for construction activities in or immediately adjacent to suitable breeding habitat resulting in permanent ground disturbance and scheduled for the breeding season.
- If breeding tricolored blackbirds are observed on site, construction activities will be avoided during the breeding season, or, if construction must take place during the breeding season, a 500- foot setback will be provided or noise-attenuating measure(s) will be implemented, until nesting has been completed in the colony. The project biologist may reduce the 500-foot setback at his or her discretion depending on the suitability of site conditions; however, the setback may not be less than 300 feet.
- Impacts to breeding western yellow-billed cuckoos will be avoided, as will direct take of occupied nests, and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.

- Focused surveys for breeding western yellow-billed cuckoo will be conducted prior to grading for construction activities that would occur in or immediately adjacent to suitable breeding/foraging habitat and that are scheduled to occur during the breeding season (May 15 through September 15) for this species. The results of the focused surveys will be submitted to CDFW.
- If breeding western yellow-billed cuckoos are observed on site, construction activities will be avoided during the breeding season, or, if construction must take place during the breeding season, a 500-foot no disturbance buffer will be established around active nests. CDFW will be consulted regarding any variance to this buffer distance. The buffer will be maintained until young have fledged and are no longer dependent on the nest or nest territory.
- All active white-tailed kite nest sites will be conserved.
- Habitat disturbances in modeled breeding/foraging habitat for yellow warbler will be avoided and effects to modeled habitat that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Direct impacts to Tehachapi pocket mouse individuals will be minimized during construction activities for commercial and residential Covered Activities.
- Depending on the existence of essential habitat elements, a live-trapping program will be conducted for Tehachapi pocket mouse in suitable habitat in the project disturbance zone and within 100 feet of the disturbance zone no earlier than 7 days prior to commencement of activities resulting in permanent ground disturbance. In order to minimize direct impacts to individuals to the extent feasible, prior to grading a trapping program would be conducted for 5 nights in suitable habitat to trap and salvage as many individuals as possible from the disturbance zone and release them in suitable habitat away from the project disturbance zone (approximately 60% of the population within the disturbance zone is estimated to be salvaged based on a 5-night trapping program). A Tehachapi pocket mouse relocation plan, which will include, at a minimum, the timing and methods for capturing and releasing adults, will be prepared prior to the initiation of grading activities. The relocation plan will be submitted to CDFW for review.
- Construction activities will be monitored in or immediately adjacent to suitable habitat, including exclusion fencing, if appropriate, to prevent Tehachapi pocket mice from entering construction zones.
- Impacts to coast horned lizard individuals will be avoided and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Surveys prior to grading will be conducted in suitable habitat. The project biologist will make reasonable efforts to capture and relocate any observed individuals to suitable habitat that is the
- closest distance to the disturbance area from where the individuals were removed. A coast horned lizard relocation plan, which will include, at a minimum, the timing and methods for capturing and
- releasing adults, will be prepared prior to the initiation of grading activities. The relocation plan will be submitted to CDFW for review.
- Construction activities in suitable habitat prior to grading will be monitored, including exclusion fencing, if appropriate, to prevent coast horned lizards from entering construction zones.
- Habitat disturbances in modeled suitable habitat for two-striped garter snake will be avoided and effects to modeled habitat that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Construction project manager will be provided two alternative options to avoid and minimize impacts to two-striped garter snake individuals:
    - Prior to grading, the project biologist will conduct daily surveys by walking through suitable habitat to be disturbed that day to clear the area of garter snakes. The project biologist will make reasonable efforts to capture and relocate any observed individuals to suitable habitat that is the closest distance to the disturbance area from where the individuals were removed. A two-striped garter snake relocation plan, which will include, at a minimum, the timing and methods for capturing and releasing adults, will be prepared prior to the initiation of grading activities. The relocation plan will be submitted to CDFW for review.
    - The project construction manager will erect exclusion fencing around the work zone in lieu of a daily monitor. After erection of the fence or other device(s), the project biologist will perform an

initial clearance survey, followed by periodic checks to verify that the fencing/device(s) are intact and functioning. Once an area has been cleared completely, additional daily monitoring and fencing/device(s) will not be required.

- Habitat disturbances in modeled suitable habitat for Fort Tejon woolly sunflower will be avoided and effects to modeled habitat that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Impacts to Fort Tejon woolly sunflower individuals will be avoided and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Surveys prior to grading will be conducted in suitable habitat within 150 feet outside of the project disturbance zone for presence/absence of Fort Tejon woolly sunflower during the appropriate survey season and when the species is detectable.
- Fort Tejon woolly sunflower locations will be marked with a protective barrier during construction activities occurring in proximity to known occurrences (no known occurrences exist within the development envelope), as described in Section 5.3.1, and, as deemed appropriate by the project biologist, construction activities will be monitored to minimize the potential for disturbance.
- Habitat disturbances in modeled suitable habitat for Kusche's sandwort will be avoided and effects to modeled habitat that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Impacts to Kusche's sandwort individuals will be avoided and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Surveys prior to grading will be conducted in suitable habitat within 150 feet outside of the project disturbance zone for presence/absence of Kusche's sandwort during the appropriate survey season and when the species is detectable.
- Kusche's sandwort locations will be marked with a protective barrier during construction activities occurring in proximity to known occurrences, as described in Section 5.3.2, and, as deemed appropriate by the project biologist, construction activities will be monitored to minimize the potential for disturbance.
- Habitat disturbances in modeled suitable habitat for round-leaved filaree will be avoided and effects to modeled habitat that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Impacts to round-leaved filaree individuals will be avoided and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Surveys prior to grading will be conducted in suitable habitat within 150 feet outside of the project disturbance zone for presence/absence of round-leaved filaree during the appropriate survey season and when the species is detectable.
- Round-leaved filaree locations will be marked with a protective barrier during construction activities occurring in proximity to known occurrences, as described in Section 5.3.3, and, as deemed appropriate by the project biologist, construction activities will be monitored to minimize the potential for disturbance.
- Habitat disturbances in modeled suitable habitat for striped adobe lily will be avoided and effects to modeled habitat that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Impacts to striped adobe lily individuals will be avoided and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Surveys prior to grading will be conducted in suitable habitat within 150 feet outside of the project disturbance zone for presence/absence of adobe striped lily during the appropriate survey season and when the species is detectable.

- If striped adobe lily is detected, the following avoidance measure will be implemented in locations where striped adobe lily is known to occur, as described in Section 5.3.4, or was observed during surveys prior to grading.
    - Grading/ground-disturbing activity will be designed to avoid permanent effects on potential pollinators by avoiding impacts to habitat within 325 feet of known striped adobe lily occurrences, as described in Section 5.3.4. The project biologist may reduce the 325-foot setback at his or her discretion depending on the suitability of site conditions.
- Striped adobe lily locations will be marked with a protective barrier during construction activities occurring in proximity to known occurrences, as described in Section 5.3.4, and, as deemed appropriate by the project biologist, construction activities will be monitored to minimize the potential for disturbance.
- Impacts to Tehachapi buckwheat individuals will be avoided and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.
- Surveys prior to grading will be conducted in suitable habitat within 325 feet outside of the project disturbance zone for presence/absence of Tehachapi buckwheat during the appropriate survey season and when the species is detectable.
- If Tehachapi buckwheat is detected, the following avoidance measure will be implemented in locations where Tehachapi buckwheat is known to occur, as described in Section 5.3.5, or was observed during surveys prior to grading.
    - The activity will be designed to avoid permanent edge effects by restricting Covered Activities within 325 feet of known Tehachapi buckwheat occurrences, as described in Section 5.3.5. The project biologist may reduce the 325-foot setback at his or her discretion depending on the suitability of site conditions; however, the setback would not be less than 100 feet unless approved by the USFWS.
    - The land on which occurrences of Tehachapi buckwheat are avoided and the 325-foot buffer (or buffer determined by the project biologist) around the occurrences will be incorporated into Established or TMV Planning Area Open Space, and these areas will be managed for the benefit of the species.
    - To preclude the invasion of Argentine ants, within the 325-foot buffer, controls will be implemented using an integrated pest management approach. The controls include (1) providing "dry zones" between development activities and buckwheat populations; (2) ensuring that dry zone container plants installed within 325 feet of buckwheat are ant free prior to installation; (3) maintaining natural hydrological conditions near the buckwheat occurrences; and (4) using drought-resistant plants in fuel modification zones to minimize irrigation requirements.
- Tehachapi buckwheat locations will be marked with protective barrier during construction activities occurring in proximity to known occurrences, as described in Section 5.3.5, and, as deemed appropriate by the project biologist, construction activities will be monitored to minimize the potential for disturbance.
- If construction for development activities is proposed within 325 feet of Tehachapi buckwheat occurrences (i.e., if the buffer is reduced by project biologist), the project biologist will perform weekly construction monitoring. The project biologist's construction monitoring tasks will include reviewing and approving protective fencing, dust control measures, and erosion control devices before construction work begins; conducting a contractor education session at the preconstruction meeting; and reviewing the site weekly (minimum) during construction to ensure the fencing, dust control, and BMP measures are in place and functioning correctly and that work is not directly or indirectly impacting the plants. Monitoring reports will include remedial recommendations and issue resolution discussions when necessary.
- Impacts to Tejon poppy individuals will be avoided and effects that cannot be avoided will be minimized to the extent practicable during construction activities for commercial and residential Covered Activities.

- Surveys prior to grading will be conducted in suitable habitat within 150 feet outside of the project disturbance zone for presence/absence of Tejon poppy during the appropriate survey season and when the species is detectable.
- Tejon poppy locations will be marked with protective barrier during construction activities occurring in proximity to known occurrences, as described in Section 5.3.6, and, as deemed appropriate by the project biologist, construction activities will be monitored to minimize the potential for disturbance.

3.2.9 Tejon Ranch Conservancy's Ranch-Wide Agreement and Ranch-Wide Management Plan

Adaptive management measures undertaken as part of the TUMSHCP is coordinated with the management strategies and adaptive management standards for the Ranchwide Agreement in the Ranchwide Management Plan. The following goals, objectives, and best management practices (BMPs) are included in the Ranchwide Management Plan and have potential relevance to the Project. It should be noted that the Plan states that additional permitting is required for any ground disturbance within covered lands, and that groundwater extraction and the transfer of water off the ranch is prohibited.

Goal W-1: Maintain and restore natural hydrologic regimes and surface-groundwater connections.

Objective W-1.2: Maintain and enhance, as appropriate, surface water and groundwater dynamics supporting riparian and wetland systems.

Conservation Activity W-1.2: Maintain and enhance surface water and groundwater dynamics based on proposed investigations. TRC will avoid changes to or expansion of groundwater extraction practices that would cause significant groundwater-related impacts to Conservation Values. Within the TUMSHCP Covered Lands, water diversion activities are also restricted by the TUMSHCP, so that there will be no significant expansion of surface or groundwater extraction practices as of June 17, 2008, the date of the Ranchwide Agreement.

BMP R-14: TRC will preclude lessees from transferring water off the ranch.

BMP R-13: TRC will coordinate development of new water systems with the Conservancy. If determined to be required, TRC will then apply for and obtain relevant approvals for new watering systems under the Ranch-wide Agreement and under applicable laws.

BMP TUMSHCP-1: TRC will develop a condor educational curriculum, prepare condor educational materials and implement a training program, such as printed brochures or other media, that will include information concerning the life history of the California condor, where condors may occur on Tejon Ranch, and prohibited behaviors related to condors (such as pursuit, capture, and harassment of individual condors and other direct interaction with condors).

BMP TUMSHCP-1a: The information shall also identify types of micro-trash that could be ingested by condors and describe measures to eliminate micro-trash at and near all construction sites, recreational areas, outdoor filming projects, roads, and back-country areas where human presence occurs.

BMP TUMSHCP-1c: Through the Public Access Plan, TRC will provide TRC guests, contractors, film crews, residents, licensees, and visitors, particularly those engaging in recreational activities in Covered Lands that could put them in close proximity to condors, with educational information regarding acceptable activities in open space areas, including recreational activities, pet restrictions, and wildlife restrictions (including prohibition on collecting individuals).

BMP TUMSHCP-1d: Project land managers will be empowered to take action to prevent any such activity that would pose a threat to condors.

BMP TUMSHCP-2: TRC will require lessees, workers, filming crews, TRC staff, and anyone accessing Conserved Lands to cease any behavior that constitutes an attractive nuisance or otherwise presents an unreasonable and avoidable danger to California condors upon direction by TRC and in coordination with the USFWS-approved Tejon Ranch Staff Biologist. Documentation describing this prohibition will not list such behaviors in detail, but will provide examples and will authorize the USFWS-approved Tejon Ranch Staff Biologist, in consultation with USFWS, to respond to changing California condor behaviors, human activities, and other conditions in Conserved Lands with whatever restrictions are deemed necessary to provide the protection intended.

BMP TUMSHCP-6: No development, new trails, or recreation activities will occur within 0.25 mile of an active golden eagle nest, within or outside of the viewshed.

BMP IS-3: TRC will minimize the potential for dispersal of invasive plant species by vehicles by communicating the locations of existing infestations to operations staff and avoiding driving off-road or parking on the side of the road in infested areas. TRC operations staff will avoid constructing new roads, fire lines, or other projects that disturb soil through existing invasive plant populations and avoid dispersing soil from those areas to unaffected areas.

BMP IS-5: TRC will monitor the presence of invasive plant species within all development areas and Designated Use Areas; around buildings and incidental ranching infrastructure, hunting cabins, and Designated Water Bank Area; and along roads maintained by TRC and will prioritize and focus eradication efforts on any newly discovered invasive species locations before they become widespread and too damaging and costly to manage.

BMP IS-8: TRC will ensure that weeds that have been cut or removed from the ground are left in place to avoid dispersing seeds and plant parts to non-infested areas, unless the weed biomass is considered a fire hazard to structures or is otherwise aesthetically unpleasing. Weed biomass that must be placed out of sight will be placed in another infested area immediately nearby. If weed biomass must be removed from the site to a designated disposal area, TRC will ensure that propagules are secured in a tarp (without holes or rips) and then carried to a vehicle. Biomass should be properly wrapped to prevent plant parts from blowing away in transit, and vehicles carrying weed biomass will be inspected prior to leaving the site to ensure that no plant parts are resting on the bumpers, tailgates, or other exposed areas.

BMP R-1b: TRC will avoid the creation of temporary roads unless the road can be constructed, operated, and decommissioned without needing specific techniques to avoid, minimize, or mitigate adverse effects to soil, water quality, and habitat resources.

BMP R-1c: In the event a temporary road is constructed, TRC will decommission it and return the land to a natural state when the access is no longer needed.

BMP R-25: TRC will avoid or minimize adverse effects to soil, water quality, and riparian resources from fuels, lubricants, cleaners, and other harmful materials discharging into nearby surface waters or potentially infiltrating to groundwater resources during equipment refueling and servicing activities.

BMP TUMSHCP-9: TRC will implement BMPs to protect surface water quality (i.e., pollutants, erosion, dust control, sedimentation) as required by applicable requirements from the federal Clean Water Act, Porter-Cologne Water Quality Control Act, and air districts.

BMP TUMSHCP-10: The installation of infrastructure (and trails) or other ground-disturbing activity in Covered Lands will include efforts to minimize the footprint of, and will use BMPs for the design and installation of, any such infrastructure, including surveys prior to grading, contractor education, staking, and temporary construction fencing.

BMP TUMSHCP-11: To ensure that diseases are not conveyed between work sites by the USFWS-approved Tejon Ranch Staff Biologist or project biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (2009) will be followed at all times.

BMP TUMSHCP-12: Prior to grading, activities in or immediately adjacent to suitable habitat for Tehachapi slender salamander will be monitored. Exclusion fencing will be erected if appropriate to prevent Tehachapi slender salamanders from entering construction zones.

3.2.10 California State Parks General Provisions

Project activities occurring west of I-5 and south of Frazier Mountain Park Road could potentially be subject to California State Park Laws. Park Laws are derived from Title 14, Division 3 of the California Code of Regulations and are in place to protect park resources. The California Code of Regulations and State Park Laws prohibit the disturbance or destruction of any plant or animal resources or modification of geological features (Sections 4305–4307).

3.2.11 Threatened and Endangered Species

Permits may be required from the USFWS and/or CDFW if activities associated with a Project have the potential to result in the "take" of a species listed as threatened or endangered under the federal and/or State Endangered Species Acts. Take is defined by the State of California as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" (16 USC 1532(19), 50 CFR 17.3). The CDFW and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

3.2.12 Designated Critical Habitat

When species are listed as threatened or endangered, the USFWS often designates areas of "Critical Habitat" as defined by section 3(5)(A) of the federal Endangered Species Act (ESA). Critical Habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical Habitat is a tool that supports the continued conservation of imperiled species by guiding cooperation with the federal government. Designations only affect federal agency actions or federally funded or permitted activities. Critical Habitat does not prevent activities that occur within the designated area. Only activities that involve a federal permit, license, or funding and are likely to destroy or adversely modify Critical Habitat will be affected.

3.2.13 Migratory Birds

The Federal Migratory Bird Treaty Act (MBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all bird's native to the United States, even those that are non-migratory. The MBTA encompasses whole birds, parts of birds, and bird nests and eggs. Additionally, California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the MBTA (Section 3513), as well as any other native non-game bird (Section 3800).

3.2.14 Birds of Prey

Birds of prey are protected in California under provisions of Fish and Game Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional

protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

3.2.15 Nesting Birds

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of "take" by the CDFW.

3.2.16 Oak Woodlands

In addition to the local policies and regulations listed above, oak trees and oak woodlands are protected by State legislature, including Sections 1360 to 1372 of the California Fish and Game Code (Oak Woodlands Conservation Act (Assembly Bill 242)) and the California Public Resources Code Section 21083.4 (Senate Bill 1334).

Senate Bill (SB) 1334, passed in 2004, requires a county to consider the conversion of oak woodlands when evaluating a project's potential environmental impacts under CEQA. Mitigation measures specified in SB 1334 include conservation of oak woodlands through the use of easements, planting and maintenance of oak trees for a seven-year period, contributions to the State's Oak Woodlands Conservation Fund, and other mitigation approaches developed by individual counties. The Oak Woodlands Conservation Act of 2001, Assembly Bill (AB) 242, established the Oak Woodlands Conservation Fund to advance the protection and promotion of biologically functional oak woodlands. The legislation defined oak woodlands as oak stands (for any species in the genus *Quercus*) with greater than 10 percent canopy cover, or a stand that may have historically supported greater than 10 percent canopy cover. Cities and counties are required to prepare, or demonstrate that they have prepared, an oak woodlands management plan in order to qualify for a grant from the fund and to certify that the proposal is consistent with the management plan. Further, proposals for projects in the jurisdiction of more than one county or city must certify that the proposal is consistent with the respective oak woodlands management plans of each county or city.

3.2.17 Wetlands and other "Jurisdictional Waters"

Natural drainage channels and adjacent wetlands may be considered "waters of the United States" or "jurisdictional waters" subject to the jurisdiction of the United States Army Corps of Engineers (USACE). The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above).

As determined by the United States Supreme Court in its 2001 *Solid Waste Agency of Northern Cook County v.* United States *Army Corps of Engineers* (*SWANCC*) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated *Carabell/Rapanos* decision, the United States Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable and therefore jurisdictional water. Furthermore, the Supreme Court clarified that the

Environmental Protection Agency (EPA) and the USACE will not assert jurisdiction over ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The USACE regulates the filling or grading of Waters of the United States under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high-water marks" on opposing channel banks. All activities that involve the discharge of dredge or fill material into Waters of the United States are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that results in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board (RWQCB) issues a Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet State water quality standards.

Under the Porter-Cologne Water Quality Control Act of 1969, the State Water Resources Control Board has regulatory authority to protect the water quality of all surface water and groundwater in the State of California ("Waters of the State"). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into Waters of the State through the issuance of various permits and orders. Discharges into Waters of the State that are also Waters of the United States require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining certain federal permits, such as a Section 404 Clean Water Act permit. Discharges into all Waters of the State, even those that are not also Waters of the United States, require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the RWQCB. The RWQCB also administers the Construction Storm Water Program and the federal National Pollution Discharge Elimination System (NPDES) program. Projects that disturb one acre or more of soil must obtain a Construction General Permit under the Construction Storm Water Program. A prerequisite for this permit is the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Projects that discharge wastewater, storm water, or other pollutants into a Water of the United States may require a NPDES permit.

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Activities that may substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a Notification of Lake or Streambed Alteration. If CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

The Project crosses several ephemeral drainage courses and intermittent streams which are tributaries to Castac Lake, a traditionally navigable water. Potential impacts, required permits, and relevant regulatory agencies will be discussed below.

3.3 Potentially Significant Project-Related Impacts, Recommendations, and Mitigation

3.3.1 Compliance with Local Policies and Habitat Conservation Plans

Appendix G to the CEQA Guidelines calls for a lead agency to analyze whether a project would "conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy, or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan" for the purposes of determining whether a project would have a significant impact on biological resources or would conflict with local land use regulations.

The TUMSHCP, Tejon Ranchwide Agreement, and Ranchwide Management plan all prohibit the expansion of extraction of groundwater or surface water from Covered Lands within the habitat conservation plan area. The Lebec Well 04 Site is located within these Covered Lands. The Tejon Ranchwide Agreement and Ranchwide Management Plan further prohibit the transfer of groundwater or surface water off of Tejon Ranch property. Therefore, the construction of a new groundwater well on TUMSHCP Covered Lands appears to conflict with the provisions of an adopted habitat conservation plan, and the transfer of water off of the Tejon ranch property appears to conflict with other approved local conservation management plans. The lead agency should consult with Tejon Ranch Conservancy and USFWS to determine whether non-compliance with provisions of the TUMSHCP and/or the Ranchwide Management Plan constitutes a significant impact to biological resources as defined by the CEQA Guidelines.

The Frazier Park/Lebec Specific Plan contains restrictions on grading activities on slopes and the removal of vegetation on undeveloped portions of property. Although Lebec CWD has an easement for the existing pipeline alignment, access routes, staging areas, and construction could potentially exceed the current easement area. Regardless, the Project applicant will need to coordinate all activities in this area with the California State Parks Department, California Department of Fish and Wildlife, Kern County, and Los Angeles County. The Frazier Park/Lebec Specific Plan requires all areas of removed vegetation to be replanted within 30 days in order to prevent erosion and ensure soil stability. Replanting within a State Park will require approvals from the California Parks Department and CDFW. The Project proponent will need to coordinate with Kern County and Los Angeles County to ensure compliance with local policies and regulations regarding ground disturbance, grading, erosion control, and revegetation requirements. Additionally, the Project proponent will need to coordinate construction activities with the California State Parks Department and CDFW to ensure compliance with local, regional, or State policies and plans to protect biological resources within a designated State Park.

Compliance with State and local oak woodlands conservation policies and plans and compliance with local oak tree preservation policies and ordinances will be discussed in **Section 3.3.4** below.

3.3.2 Project-Related Impacts to Jurisdictional Waters, Water Quality, Wetlands, Navigable Waters, Wild and Scenic Rivers, or other Aquatic Features, and Riparian Habitat

Castac Lake is a designated traditionally navigable water (TNW), and Cuddy Creek has historically been designated a jurisdictional water because it is a direct tributary to Castac Lake (Impact Sciences, Inc., 2008). Given the downstream hydrological connection to a TNW, all of the ephemeral drainages that are tributaries to Cuddy Creek may also be considered Waters of the United States and subject to USACE's jurisdiction under Section 404 of the Clean Water Act. Additionally, Projects that conduct activities within Waters of the United States would be required to obtain a Section 401 Water Quality Certification from the RWQCB. Water features that are not considered jurisdictional may still be considered Waters of the State and be subject to Waste Discharge Requirements administered by the RWQCB. USACE and RWQCB permits typically include additional measures to ensure that Project activities do not result in degradation of water quality, and said permits are generally issued on the condition that the applicant agrees to provide mitigation that results in no net loss of wetland functions or values.

If a project takes water from a lake, river, stream, creek, or from underground supplies, the California Water Code (Division 2) requires the project proponent to obtain a water right from the SWRCB. When considering the appropriation of water, the SWRCB is required to consult with CDFW regarding the amounts of water needed for fish and wildlife. If the amount of water appropriated for a project would reduce the amount of water available for fish and wildlife to a point at which adverse effects may occur, there exists the potential for significant impacts under CEQA.

Further, the SWRCB will not accept a water rights application for streams (or stream reaches) that have been declared by the SWRCB to be fully appropriated, and it will not issue a permit unless there is water available for appropriation. The Project area and proposed Well 04 site are located within a SWRCB-designated year-round Fully Appropriated Stream System (FASS) Watershed (SWRCB, 2020). The FASS map and designation of the Project area were based on an investigation and decision made in the 1940s after an applicant proposed to withdraw water from two unnamed springs that are tributaries to Cuddy Creek and Castac Lake in the Castac Lake watershed. In 1941 the SWRCB determined that there was no water available for appropriation (Decsion 9838, 1941), and in 1998 the SWRCB adopted Water Right Order 98-08, which upheld that decision (WRO 98-08, 1998).

CDFW claims jurisdiction over all natural drainages and lakes, including the streambed, banks, floodplain, and riparian corridor, according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Project activities conducted within or adjacent to any drainages or lakes would require submittal of an LSA Notification package. CDFW may require additional permitting for the placement of Well 04 in the vicinity of Cuddy Creek and/or Castac Lake if it can be shown that use of the well could result in reduced flow in Cuddy Creek, Castac Lake, or any other natural drainages, including springs, seeps, and subterranean streams. Each crossing and each activity may be considered a separate project and require separate fee payments. After receiving the LSA Notification, if CDFW determines that the Project activities may result in impacts to fish and wildlife resources, CDFW may issue an LSA Agreement with additional avoidance, minimization, and mitigation measures.

In order to quantify potential Project-related impacts to State- or federally-protected wetlands, riparian habitat, and fish and wildlife that depend on these resources, it is recommended that the Project proponent proceed with an aquatic resources delineation and initiate consultation with SWRCB, USACE, CDFW, and RWQCB. These recommendations are not necessarily considered mitigation measures, because they should be completed well in advance of Project implementation, concurrent with the analysis of potential environmental impacts. If any of the aforementioned regulatory agencies determine that the Project has potential to adversely affect State or federally protected wetlands, riparian habitat, and fish and wildlife resources dependent on these resources and impacts cannot be mitigated to a less than significant level, these regulatory agencies may deny the required permits for implementation of the Project. For example, USACE will not issue a Section 404 permit for a project if a practicable alternative exists that would have less adverse impact on the aquatic ecosystem.

3.3.3 Project-Related Impacts to Special Status Plants and/or Sensitive Natural Communities Present or with Potential to Occur Onsite

31 regionally occurring special status plants appeared on the CNDDB and IPaC database queries of the Project area, and as discussed in **Table 2**, the following 15 species were declared possible or likely to occur onsite, and therefore, could potentially be impacted by Project activities: Big Bear Valley woollypod (*Astragalus leucolobus*), calico monkeyflower (*Diplacus pictus/Mimulus pictus/Eunanus pictus*), Davidson's bush-mallow (*Malacothamnus davidsonii*), Fort Tejon woolly sunflower (*Eriophyllum lanatum* var. *hallii*), Lemmon's jewelflower (*Caulanthus lemmonii*), Mt. Pinos onion (*Allium howellii* var. *clokeyi*), pale-yellow layia (*Layia heterotricha*), Palmer's mariposa-lily (*Calochortus palmeri* var. *palmeri*), Piute Mountains navarretia (*Navarretia setiloba*), Robbins' nemacladus (*Nemacladus secundiflorus* var. *robbinsii*), salt spring checkerbloom (*Sidalcea neomexicana*), San Bernardino aster (*Symphyotrichum defoliatum*), short-jointed beavertail (*Opuntia basilaris* var. *brachyclada*), slender mariposa-lily (*Calochortus clavatus* var. *gracilis*), and Tracy's eriastrum (*Eriastrum tracyi*). The following sensitive natural communities have been mapped adjacent to Project areas: valley needlegrass grassland, wildflower field, Cottonwood Willow Riparian Forest, and valley oak woodland.

Implementation of the Project would result in impacts to the following habitats: sagebrush shrubland, non-native grassland, ruderal, developed, and intermittent and ephemeral streams. Permanent impacts would be limited to ruderal habitat at both the Chimney Canyon tank site and the FMHS booster pump location, and non-native grassland and sagebrush shrubland habitat at the Lebec Well 04 Site. The remaining potential impacts are related to the placement of the water distribution pipeline, which will be buried in a trench beneath grade. The pipeline alignment would result in temporary impacts to sagebrush shrubland, non-native and native grassland, ruderal, developed, and intermittent and ephemeral stream habitats.

Sensitive natural communities or special status plants were not observed within the surveyed areas at the time of either biological reconnaissance survey

The Project area is located at the convergence of several prominent eco-regions, including the San Joaquin Valley, Mojave Desert, and the southern Sierra Nevada, Coast, Tehachapi, and Transverse mountain ranges. This region serves as an important transition zone between biomes, climates, and geographic features, and as such, has unique soils and features conducive to a wide variety of plants. The Los Padres National Forest is one of the most botanically diverse National Forests in the United States (USDA Forest Service, 2020), and Tejon Ranch reportedly supports at least 45 taxa classified by CNPS as species of special concern (Mayence, Jensen, Kramer, Pavliscak, & White, 2017).

Rare plant surveys were conducted in 2003 and 2007 for the Tejon Mountain Village Plan Area and no rare plant observations were reported in the vicinity of the Lebec Well 04 Site (Kern County Planning Department, 2009). Likewise, rare plant surveys were conducted in 2006 for the Project area containing the proposed pipeline alignment (from FMHS to Frazier Mountain Park Road). Those surveys also resulted in an absence of rare plant observations (Kern County Planning Department, 2009). However, many of the regionally occurring rare plants were not discovered until recently. For example, prior to the creation of the Tejon Ranch Conservancy and increased efforts to comprehensively document the flora of Tejon Ranch, only about 1,300 botanical collections were credited to the Ranch. From 2011 to 2017, that number increased to 7,000 collections (Mayence, Jensen, Kramer, Pavliscak, & White, 2017), and in 2016 Tejon Ranch Conservancy reported at least three new species to science and a 50% increase in the rare plants known to exist on the Ranch prior to their cataloguing efforts (White, 2016). When surveying for rare plants, there are several reasons a species may not be observed: 1) conditions may not have been conducive for germination that year, 2) germinants or seedlings were predated or did not mature for some reason, 3) surveys may not have been conducted in suitable habitat and/or at the appropriate time, or 4) populations were too small and inconspicuous. For instance, while Tejon Hills is currently known as a hotpot for rare plant occurrences, it wasn't until the winter of 2015-2016 when precipitation amount and timing for the region were appropriate after several years of drought that numerous rare plant species were observed in sizeable populations (Mayence, Jensen, Kramer, Pavliscak, & White, 2017).

According to CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (2018), Protocol-level botanical field surveys should be conducted when: 1) natural (or naturalized) vegetation occurs in an area that may be directly or indirectly affected by a project (project area), and it is unknown whether or not special status plants or sensitive natural communities occur in the project area; 2) special status plants or sensitive natural communities have historically been identified in a project area; or 3) special status plants or sensitive natural communities occur in areas with similar physical and biological properties as a project area. There are historical CNDDB occurrences of rare plant populations within the Project areas; there are sensitive natural communities recorded adjacent to Project areas, and there are known special status plants and sensitive natural communities in areas within similar habitats in the Project's vicinity. Therefore, the Project currently being evaluated should have a Protocol-level botanical survey conducted in order to determine the Project's potential to impact to rare plants and sensitive natural communities and to quantify said impacts.

In order to ensure protection of rare plant species and sensitive natural communities and/or compensate for a potential loss, it is recommended that the Project proponent proceed with Protocol-level botanical surveys. If special status plants or sensitive natural communities are detected onsite, the Project proponent will need to initiate consultation with CDFW and/or USFWS to determine if the loss would represent a significant impact and if that impact can be reduced or compensated for. These recommendations are not necessarily considered

mitigation measures, because they should be completed well in advance of Project implementation, concurrent with the analysis of potential environmental impacts. Recommendations regarding next steps are outlined below:

Recommendation Plant-1 (Focused Survey): A qualified botanist/biologist shall conduct focused botanical surveys according to CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (2018).

Recommendation Plant-2 (Formal Consultation): If rare plant individuals or populations or sensitive natural communities are detected within Project work areas during the focused botanical survey, the Project proponent shall initiate consultation with CDFW and/or USFWS. If CDFW and/or USFWS determines that "take" cannot be avoided, the Project proponent may be required to obtain an Incidental Take Permit (ITP).

Even if no rare plants or designated sensitive natural communities of special concern are detected on the focused botanical surveys, the Project's impacts to native or naturalized habitat and native vegetation alliances could still be considered significant and would require mitigation.

The Project proposes permanent impacts to non-native grassland habitat and sagebrush shrubland habitat at the Lebec Well 04 Site on Tejon Ranch; permanent impacts to ruderal habitat at the chimney Canyon Tank site; and permanent impacts to ruderal habitat at FMHS. Temporary impact areas include those related to the placement of the distribution pipeline within the following habitats: ruderal, developed, non-native grassland, and sagebrush shrubland.

Permanent impacts at the Lebec Well 04 Site are located within an area designated for development under the TUMSHCP, and Tejon Ranch has already mitigated for the loss of habitat in those areas by dedicating 240,000 acres to conservation. Therefore, impacts to areas within TUMSHCP Covered Lands for Covered Activities are considered less than significant; the lead agency should consult with Tejon Ranch Conservancy and USFWS to establish whether the proposed Project qualifies as a Covered Activity.

Permanent impacts at the Chimney Canyon Tank site and at FMHS are proposed within ruderal areas that already contain significant development and provide minimal value to native wildlife. Therefore, permanent impacts within FMHS property and the Chimney Canyon Tank site are also considered less than significant.

Temporary impacts to the ruderal habitat adjacent to freeways and roads would be considered less than significant for the same reason. Conversely, temporary impacts to grassland and sagebrush shrubland habitats within the Project area could be considered significant if not appropriately mitigated. The Frazier Park/Lebec Specific Plan restricts grading to slopes of less than 30 percent, requires retention of natural vegetation on undeveloped lands, and requires replacement of all removed vegetation by replanting within 30 days of Project completion. The lead agency should consult with Kern County regarding the applicability of the Specific Plan to the proposed Project.

In addition to potential compliance with the Frazier Park/Lebec Specific Plan, the Project proponent should consult with the California State Parks Department and CDFW regarding the clearing of vegetation and replanting measures for the Project areas within State Park land. These agencies will likely require that the applicant prepare and submit a mitigation and monitoring plan prior to implementation of the Project. This plan typically includes a proposed re-seeding and/or re-planting schedule with a list of native species to be used, a schedule for planting and/or re-seeding activities, measures to reduce or avoid the spread of noxious weeds and invasive vegetation, and monitoring requirements in order to ensure success of replanting/re-seeding measures.

3.3.4 Project-Related Impacts to Oak Trees and/or Oak Woodlands

Oak trees and oak woodlands are protected by a variety of State and local regulations, including the Los Angeles County Oak Tree Ordinance (Section 22.56.2050), the California Fish and Game Code (Sections 1360 to 1372) Oak Woodlands Conservation Act (AB 242), and California Public Resources Code Section 21083.4 (Senate Bill 1334). The Kern County General Plan, Tejon Mountain Village Specific and Community Plan, the TUMSHCP, the Tejon Ranchwide Management Plan, Los Angeles County General Plan, and the Los Angeles County Oak Woodlands Conservation Management Plan all contain oak tree and oak woodland conservation policies. State laws and the Los Angeles County Oak Woodlands Conservation Management Plan focus on conservation of oak woodlands, while the Los Angeles County Oak Tree Ordinance regulates impacts to individual oak trees. The Kern County General Plan contains policies related to both oak woodlands and individual oak trees.

There is at least one oak tree present along the proposed alignment. One mature valley oak (*Quercus lobata*) was observed along the alignment through the Lebec Northbound Rest Area, as illustrated on **Figure 4** and in Photographs 16, 74-76. Oak woodlands and individual oak trees were observed throughout the vicinity of the Project. A review of aerial imagery shows individual trees present within the FMHS campus, and potential trees along the portion of the alignment through State lands. The Project does not propose removal of any trees to facilitate placement of the pipeline; however, ground disturbance and soil compaction within the root zone can damage or kill an otherwise healthy tree.

The majority of the Project falls within Kern County, and a small segment of the alignment along the south side of Frazier Mountain Park Road passes through Los Angeles County. The oak tree along the alignment at the Lebec Northbound Rest Area is located within the Kern County General Plan Area. The Kern County General Plan contains a policy that requires the Project proponent to protect oak woodlands and large oak trees where possible. Oak woodlands are defined in the California Fish and Game Code (Section 1361.h) as "an oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover." Although oak woodlands are abundant in the vicinity of the Project, no oak woodlands or oak stands were observed within the surveyed Project areas, although, as mentioned above, at least one large individual oak was present along the alignment within the Lebec Northbound Rest Area. In order to protect individual oaks and ensure compliance with the Kern County General Plan, the Project will implement mitigation measures **OAK-1a** through **1c**, listed below.

Los Angeles County's oak tree and oak woodland protections are much more stringent than Kern County's. Although there are no oak trees located within the proposed alignment along the south right-of-way of Frazier Mountain Park Road that passes through Los Angeles County, there are oak trees and oak stands within 200 feet of the Project area. Under the definitions of the Los Angeles County Oak Woodlands Conservation Management Plan (Plan), these oak stands could be considered oak woodlands. Discretionary projects with two or more oak trees with diameters of at least five inches are subject to the provisions of the Plan requirements. Furthermore, site maps submitted as part of the review process are required to include oak trees within 200 feet of the Project in order to ensure there is no impact to oak woodlands in the vicinity. While there are oak trees, oak stands, and potential oak woodlands as defined by the Plan located within 200 feet of the Project's APE, it can be argued that the Project will clearly not result in a net loss of oak woodlands because oak trees are absent from the proposed construction areas, and oak trees in the vicinity are located in a degraded and developed area, separated from the APE by a compacted dirt road.

The Los Angeles Oak Tree Ordinance (Section 22.56.2050) applies to all unincorporated areas of the County and is in place to protect individual oak trees. Under this ordinance, a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any tree in the oak tree genus without first obtaining a permit. The protected zone is defined in the ordinance as "that area within the dripline of an oak tree and extending therefrom to a point at least five feet outside of the dripline, or 15 feet from the trunks of a tree, whichever distance is greater." When applying for a permit, the applicant is required to provide a map illustrating "the location of all oak trees subject to this [ordinance] proposed to be removed, damaged, encroached, relocated, or within 200 feet of proposed construction, grading, landfill, or other activity."
Although the Project's APE may not encroach into the protected zone of an oak tree, there are oak trees and oak stands located within 200 feet of the Project's proposed construction activities within Los Angeles County,

and therefore, the Project proponent should contact Los Angeles County to determine whether or not an oak tree encroachment permit is required.

In order to avoid and/or minimize the Project's potential impacts to individual oak trees and oak woodlands, the Project proponent shall implement the following mitigation measures:

Mitigation Measure OAK-1a (Avoidance): Prior to initiating construction activities, including staging and mobilization, an ISA Certified Arborist or a Registered Professional Forester shall survey the Project area for oak trees. Each oak tree measuring at eight inches in diameter at breast height (4.5 feet above natural grade) or greater within or adjacent to the Project site will be flagged and protected in place. The location and disturbance-free buffer zone shall be illustrated on a site map and delineated with brightly colored flagging or fencing for construction personnel. The disturbance-free buffer zone shall include the area within the unaltered dripline of an oak tree and extending therefrom to a point at least five feet outside of the dripline, or 15 feet from the trunk of a tree, whichever distance is greater. The disturbance-free buffer shall be maintained for the duration of the Project's construction activities, when feasible.

Mitigation Measure OAK-1b (Best Management Practices): If complete avoidance of the disturbance-free buffer is infeasible, the Project proponent shall consult with the ISA Certified Arborist or Registered Professional Forester prior to encroachment into the oak protection zone. The Arborist or Forester shall survey the tree and develop best management practices to minimize impacts to oak trees during construction. Examples of best management practices include, but are not limited to placing mulch layers to reduce soil compaction, adjustments to changes in grade to minimize root disturbance, root pruning to reduce mechanical damage to roots caused by grading equipment, and rinsing tree canopies by water truck to remove accumulated dust from construction activities.

Mitigation Measure OAK-1c (Replacement or Compensatory Mitigation): If oak trees cannot feasibly be protected in place and removal is required or if construction activities result in mortality of oak trees, the Project proponent shall coordinate with the ISA Certified Arborist or the Registered Professional Forester and the appropriate public agency (Kern County or Los Angeles County) to determine the best course of action to mitigate for the loss. Examples of potentially acceptable mitigation for the loss of an oak tree include, but are not limited to onsite replacement plantings (at a ratio determined by the arborist/forester and the public agency), offsite replacement plantings (at a location approved by the arborist/forester and public agency, and only when onsite plantings are infeasible), relocation of a tree (when the arborist or forester determines relocation to be feasible), or monetary donation to an appropriate preservation/conservation fund (determined by the public agency).

3.3.5 Project-Related Impacts to Special Status Animal Species Present or with Potential to Occur Onsite

Species identified as candidate, sensitive, or special status species in local or regional plans policies or regulations by CDFW or the USFWS that have the potential to be impacted by the proposed Project are identified below with corresponding mitigation measures.

3.3.5.1 General Mitigation Measures

Prior to the start of construction, all personnel associated with construction of the Project shall be trained to be able to identify these candidate, sensitive, or special status species in order to prevent impacts to sensitive resources; therefore, the following general mitigation measures shall be implemented:

Mitigation Measure GEN-1 (WEAP Training): Prior to initiating construction activities (including staging and mobilization), all personnel associated with Project construction shall attend mandatory Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in identifying special status resources that may occur in the Project area. The specifics of this program shall include identification of the sensitive species and suitable habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the

limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. This training will specifically discuss the conservation status of the California condor, in addition to all other special status species, describe the laws and regulations in place to provide protection of these species, identify the penalties for violation of applicable environmental laws and regulations, and a list of required protective measures to avoid "take." A fact sheet conveying this information, along with photographs or illustrations of sensitive species with potential to occur onsite, shall also be prepared for distribution to all contractors, their employees, and all other personnel involved with construction of the Project. All employees shall sign a form documenting that they have attended WEAP training and understand the information presented to them.

Mitigation Measure GEN-2 (Construction Operational Hours): Construction shall be conducted during daylight hours to reduce disturbance to wildlife that could be foraging within work areas.

Mitigation Measure GEN-3 (BMPs): The Project proponent will ensure that all workers employ the following best management practices (BMPs) in order to avoid and minimize potential impacts to special status species:

> ***GEN-3a:*** Vehicles shall observe a 15-mph speed limit while on unpaved access routes.
>
> ***GEN-3b:*** Workers shall inspect areas beneath parked vehicles prior to mobilization. If special status species are detected beneath vehicles, the individual will either be allowed to leave of its own volition or will be captured by the qualified biologist (must possess appropriate collecting/handling permits) and relocated out of harm's way to the nearest suitable habitat beyond the influence of the Project work area. "Take" of listed (rare, threatened, or endangered) is prohibited. If a listed species is observed within the Project area, the biologist will stop work and contact the appropriate regulatory agency (CDFW and/or USFWS) for guidance on how to proceed.
>
> ***GEN-3c:*** The presence of any special status species and/or any wildlife mortalities will be reported to the Project's designated biologist and the appropriate regulatory agencies (CDFW, USFWS, California State Parks Department, Tejon Ranch Conservancy, etc.).

3.3.5.2 Project-Related Mortality and/or Disturbance of Nesting Raptors, Migratory Birds, and Special Status Birds

The Project site contains suitable nesting and foraging habitat for a variety of avian species, including the following special status, as indicated in **Table 1** above: bald eagle (*Haliaeetus leucophalus*), burrowing owl (*Athene cunicularia*), California condor (*Gymnogyps californianus*), California horned lark (*Eremophilia alpestris actia*), Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), golden eagle (*Aquila chrysaetod*), grasshopper sparrow (*Ammodramus savannarum*), loggerhead shrike (*Lanius ludovicianus*), prairie falcon (*Falco mexicanus*), purple martin (*Progne subis*), tricolored blackbird (*Agelaius tricolor*), and yellow warbler (*Setophaga petechia*).

Although oak trees were observed along the alignment and adjacent to Project areas, old-growth trees, conifers, and cliff faces that serve as suitable nesting habitat for bald or golden eagles and California condor were absent. Therefore, these fully-protected species would only be expected to pass over or through the Project while foraging or during migration or dispersal movements. Bald eagles may forage over Castac Lake or adjacent grasslands, and California condors may forage on large mammal remains within the adjacent forests, grasslands, and rangelands. Condors have been documented within Tejon Ranch and within the mountain ranges in the vicinity of the Project. Hunting areas are designated as lead-free ammunition zones in this region in order to protect foraging condors.

Typical riparian nesting habitat for tricolored blackbird and loggerhead shrike was not observed within the surveyed areas, but both of these species are known to inhabit grassland and sagebrush-dominated habitats and could conceivably nest in dense shrubs onsite. The California horned lark may nest and forage within the grasslands of the Project area, and other ground-nesting birds, such as the disturbance-tolerant killdeer could

nest on bare ground or gravel substrate. Several killdeer were observed within the ruderal habitat adjacent to the Lebec Northbound Rest Area.

Trees within or adjacent to Project areas could serve as suitable nesting habitat for a variety of avian species, including raptors such as the red-tailed hawk (*Buteo jamaicensis*) and prairie falcon, both of which were observed onsite during the field survey. These species, and a variety of other avian species would be expected to utilize the expanse of grassland and sagebrush shrubland habitats onsite for foraging.

In the event that a special status bird or any avian species were foraging within the Project site during construction activities, the individual would be expected to fly away from disturbance it encounters, subsequently eliminating the risk of injury or mortality while foraging. However, construction activities have the potential to affect nesting birds either through direct mortality or injury or by disturbing birds nesting in the vicinity, resulting in nest abandonment. Project activities that adversely affect the nesting success of special status birds, raptors, and migratory birds or result in the mortality of individual birds constitutes a violation of State and federal laws and is considered a significant impact under CEQA and NEPA.

The proposed pipeline from Lebec Well 04 Site that travels toward I-5 adjacent to the Rest Area passes directly through a mature valley oak tree. In order to facilitate placement of the pipeline, it is assumed that this tree would be removed. A few additional trees could potentially be impacted by Project activities along the perimeter of FMHS, and the pipeline alignment from the school to Frazier Mountain Park Road. Additional flora impacts include the clearing of herbaceous vegetation and shrubs along the alignments and at each of the proposed Project component locations. Tree removal and vegetation clearing could be considered a reduction in suitable avian nesting habitat. If the disturbed areas along the proposed pipeline alignments were re-planted and restored, these impacts would be considered temporary and less than significant. The Kern County General Plan, Tejon Mountain Village Specific Plan, the Lebec/Frazier Park Specific Plan, Los Angeles County General Plan, the Antelope Valley Area Plan, and the Los Angeles Oak Woodlands Conservation Management Plan all contain policies regarding the protection of oak trees and native vegetation within natural landscapes. Potential Project-related impacts to oak trees, native vegetation, sensitive natural communities, habitat for special status species, and compliance with relevant plans and policies were discussed in **Sections 3.3.1** through **3.3.4** above.

Covered Activities on TUMSHCP covered lands are required to comply with all of the adopted measures in the TUMSHCP, the Tejon Ranch-Wide Agreement, and the Ranch-Wide Management Plan, as described in **Sections 3.2.8** and **3.2.9** above. Compliance with these adopted measures, which include environmental training, pre-construction surveys and construction monitoring conducted by a qualified biologist, and several other avoidance and minimization measures, typically ensures that a Covered Activity's potential impacts to nesting raptors, migratory birds, and most special status avian species while working on Covered Lands remain less than significant. In the unlikely event "take" of these resources occurs during Covered Activities conducted on Covered Lands, the activity would be covered under Tejon Ranch Conservancy's existing Incidental Take Permit. The lead agency should consult with Tejon Ranch Conservancy and USFWS to establish whether the proposed Project qualifies as a Covered Activity.

In order to avoid and minimize potential Project-related impacts to nesting raptors, migratory birds, and most special status avian species, the Project proponent will implement similar protective measures to those required by the TUMSHCP. Implementation of general mitigation measure **GEN-1** listed above, requires each employee, worker, or visitor onsite to attend a mandatory training session, including printed educational materials regarding sensitive biological resources, including nesting birds and special status avian species with potential to occur onsite, laws protecting these resources, penalties for violation of those laws, and a list of required protective measures that must be employed to avoid "take." In addition to the mandatory training, the Project proponent will ensure implementation of the following measures in all work areas:

> ***Mitigation Measure BIRD-1a (Avoidance):*** The Project's construction activities shall occur, if feasible, between September 1 and January 31 (outside of nesting bird season) in an effort to avoid impacts to nesting birds.

Mitigation Measure BIRD-1b (Pre-construction Survey): If activities must occur within nesting bird season (February 1 to August 31), a qualified biologist shall conduct pre-construction surveys for active nests within 30 days prior to the start of construction. The survey shall include the proposed work area and surrounding lands within 500 feet. If no active nests are observed, no further mitigation is required. Raptor nests are considered "active" upon the nest-building stage. All other nests are considered "active" by the presence of eggs or young.

Mitigation Measure BIRD-1c (Establish Buffers): On discovery of any active nests or breeding colonies near work areas, the biologist shall determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. Specifically, a 300-foot disturbance-free buffer shall be implemented around breeding colonies of tricolored blackbird, and a 500-foot disturbance-free buffer shall be implemented around active raptor nests. Construction buffers shall be identified with flagging, fencing, or other easily visible means, and shall be maintained until the biologist has determined that the nestlings have fledged.

In addition to potential compliance with the required measures of the TUMSHCP, the Tejon Ranch-Wide Agreement, and the Ranch-Wide Management Plan while working within the Covered Lands, implementation of mitigation measures **GEN-1** and **BIRD-1a** through **BIRD-1c** listed above, will avoid and minimize the Project's potential impacts to nesting raptors, migratory birds, and most special status birds (including California horned lark, Cooper's hawk, ferruginous hawk, grasshopper sparrow, loggerhead shrike, prairie falcon purple martin, tricolored blackbird and yellow warbler to a less than significant level under CEQA and NEPA and will ensure compliance with State and federal laws protecting these resources. Avian species regarding additional protective measures will be discussed in detail in the following sections.

3.3.5.3 Project-Related Mortality and/or Disturbance of Burrowing Owl

The Project site's elevation and location within the foothills and mountains makes it unsuitable breeding habitat for burrowing owl. However, this species could potentially winter within grasslands or ruderal areas onsite or in the Project's vicinity. Furthermore, this species could pass through Project areas during dispersal or migratory movements, and grasslands present onsite represent suitable foraging habitat.

The Project involves excavation and ground-disturbance associated with the development of a well and distribution pipelines. In the unlikely event that burrowing owls were nesting at the time of ground disturbance, individuals could be injured or killed by burrow collapse. Project-related construction in the vicinity could also disturb nesting owls, causing a breeding pair to abandon their nest. Project activities resulting in injury or mortality of burrowing owl individuals or that adversely affect nesting success would be considered a significant impact under CEQA and NEPA. Wintering owls in the vicinity would be expected to fly away from disturbance, but given their fossorial nature, extra care should be taken to ensure protection of this species prior to ground disturbance. Removal of active burrows could be considered a significant impact if there were not an abundance of alternative suitable burrows in the Project's vicinity.

Covered Activities on TUMSHCP Covered Lands are required to comply with all of the adopted measures in the TUMSHCP, the Tejon Ranch-Wide Agreement, and the Ranch-Wide Management Plan, as described in **Sections 3.2.8** and **3.2.9** above. Compliance with these adopted measures, which include environmental training, pre-construction surveys, avoidance of active burrowing owl burrows, and potential relocation of burrowing individuals, typically ensure the activity's potential impacts to burrowing owl while working on Covered Lands remain less than significant. In the unlikely event that "take" of this species occurs during Covered Activities conducted on Covered Lands, the activity would be covered under Tejon Ranch Conservancy's existing Incidental Take Permit. Additionally, Tejon Ranch has already mitigated for any loss of habitat resulting from Covered Activities conducted within Covered Lands designated for development by dedicating 240,000 acres of land to conservation. The lead agency should consult with Tejon Ranch Conservancy and USFWS to establish whether the proposed Project qualifies as a Covered Activity.

In order to avoid and minimize potential Project-related impacts to burrowing owl, the Project proponent will implement similar protective measures to those required by the TUMSHCP. Implementation of general

mitigation measure **GEN-1** listed above, requires each employee, worker, or visitor onsite to attend a mandatory training session, including printed educational materials regarding sensitive biological resources, including burrowing owl, laws protecting this species, penalties for violation of those laws, and a list of required protective measures that must be employed to avoid "take." In addition to the mandatory training, the Project proponent will ensure implementation of the following measures derived from the CDFW 2012 *Staff Report on Burrowing Owl Mitigation,* in all work areas:

> ***Mitigation Measure BUOW-1a (Pre-construction Take Avoidance Survey):*** A qualified biologist shall conduct a pre-construction take avoidance survey for burrowing owls and suitable burrows, in accordance with CDFW's *Staff Report on Burrowing Owl Mitigation* (2012), within 30 days prior to the start of construction activities. The survey shall include the proposed work area and surrounding lands within 500 feet. If no burrowing owl individuals or suitable burrows are observed, no further mitigation is required.
>
> ***Mitigation Measure BUOW-1b (Avoidance):*** If an active burrowing owl burrow is detected, the occurrence shall be reported to the local CDFW office and the CNDDB, and disturbance-free buffers shall be implemented in accordance with CDFW's 2012 *Staff Report on Burrowing Owl Mitigation,* as outlined in the table below:

Location	Time of Year	Level of Disturbance		
		Low	Medium	High
Nesting sites	April 1 – August 15	200 meters	500 meters	500 meters
Nesting sites	August 16 – October 15	200 meters	200 meters	500 meters
Nesting sites	October 16 – March 31	50 meters	100 meters	500 meters

> ***Mitigation Measure BUOW-1c (Consultation with CDFW and Passive Relocation):*** If avoidance of an active burrowing owl burrow is not feasible, CDFW shall be immediately consulted to determine the best course of action, which may include passive relocation during non-breeding season. Passive relocation and/or burrow exclusion shall not take place without coordination with CDFW and preparation of an approved exclusion and relocation plan.

In addition to potential compliance with the required measures of the TUMSHCP, the Tejon Ranch-Wide Agreement, and the Ranch-Wide Management Plan while working within the Covered Lands, implementation of mitigation measures **GEN-1** and **BUOW-1a** through **BUOW-1c** listed above, will avoid and minimize the Project's potential impacts to burrowing owl to a less than significant level under CEQA and NEPA and will ensure compliance with State and federal laws protecting this species.

3.3.5.4 Project-Related Mortality and/or Disturbance of California Condor

As mentioned above in **Section 3.3.5.2**, the Project area does not contain suitable nesting habitat for the California condor. However, an expanse of suitable foraging habitat is present, and this fully-protected species is known to occur year-round in the Project's vicinity.

Covered Activities on TUMSHCP Covered Lands are required to comply with all of the adopted measures in the TUMSHCP as described in **Sections 3.2.8** and **3.2.9** above. Compliance with these adopted measures, which include environmental training, construction monitoring conducted by a qualified biologist, prohibition of the deposition of micro-trash, and several other avoidance and minimization measures, typically ensure a Covered Activity's impacts to California condor while working on Covered Lands remain less than significant. In the unlikely event that "take" of this species occurs during Covered Activities conducted on Covered Lands, the activity would be covered under Tejon Ranch Conservancy's existing Incidental Take Permit. Additionally, Tejon Ranch has already mitigated for any loss of habitat resulting from Covered Activities conducted within Covered Lands designated for development by dedicating 240,000 acres of land to conservation. The lead agency should consult with Tejon Ranch Conservancy to establish whether the proposed Project qualifies as a Covered Activity.

In order to avoid and minimize potential Project-related impacts to California condor, the Project proponent will implement similar protective measures to those required by the TUMSHCP. Implementation of general mitigation measure **GEN-1** listed above, requires each employee, worker, or visitor onsite to attend a mandatory training session, including printed educational materials regarding the conservation status of the California condor, laws protecting this species, penalties for violation of those laws, and a list of required protective measures that must be employed to avoid "take." In addition to the mandatory training, the Project proponent will ensure implementation of the following measures in all work areas:

> ***Mitigation Measure CON-1a (Monitor):*** A qualified biological monitor will be present during all construction activities. If a California condor is observed foraging or roosting within the viewshed of the construction activities, all work shall be halted until the California condor leaves of its own volition.
>
> ***Mitigation Measure CON-1b (Reporting):*** If any large mammal (deer, antelope, mountain lion, bear, cattle, sheep, wild pig, etc.) carcasses are encountered during Project activities, the Project proponent will immediately stop work and notify CDFW and USFWS to report the finding of a potential food source which may attract foraging California condors to the Project area. Work will not resume until the Project proponent has received guidance from CDFW and USFWS on how to proceed. If either CDFW or USFWS determines that potential take of California condor cannot be avoided, the Project proponent will initiate formal consultation and obtain an Incidental Take Permit.

In addition to potential compliance with the required measures of the TUMSHCP, the Tejon Ranch-Wide Agreement, and the Ranch-Wide Management Plan while working within the Covered Lands, implementation of mitigation measures **CON-1a**, **CON-1b** and mitigation measures **GEN-1**, and **BIRD-1a** through **BIRD-1c** listed above, will avoid and minimize the Project's potential impacts to the fully-protected California condor to a less than significant level under CEQA and NEPA and will ensure compliance with State and federal laws protecting this species.

3.3.5.5 Project-Related Mortality and/or Disturbance of Bald and Golden Eagles

Bald and golden eagles are well documented in the Project's vicinity. The bald eagle is protected under the California Endangered Species Act, and both species are fully protected by the federal Bald and Golden Eagle Protection Act in addition to the Migratory Bird Treaty Act and the California Fish and Game Code. The Bald and Golden Eagle Protection Act prohibits take, possession, sale, purchase, barter, offer to sell, purchase, or barter, transport, or export/import of any eagle, alive or dead, including any part, nest, or egg, unless allowed by permit. The term "take" includes to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

Bald eagles reportedly roost and forage over Castac Lake. Golden eagles have been documented as year-round residents of Tejon Ranch and there is one potential nesting observation recorded approximately 5.5 miles east of FMHS. The Project areas provide suitable foraging habitat for these species, and although suitable nest trees, structures, and cliffs are absent from the Project areas, these features undoubtedly occur in the vicinity. Bald eagles typically breed further north and migrate south for winter. Therefore, this species would be expected to occur as a winter migrant only. Although not impossible, the presence of a bald eagle nest in this region would be atypical.

Project-related activities that result in injury, mortality, or disturbance to nesting, foraging, or roosting bald or golden eagles would violate State and federal laws protecting these species and would be considered a significant impact under CEQA and NEPA.

Covered Activities on TUMSHCP Covered Lands are required to comply with all of the adopted measures in the TUMSHCP, the Tejon Ranch-Wide Agreement, and the Ranch-Wide Management Plan, as described in **Sections 3.2.8** and **3.2.9** above. Compliance with these adopted measures, which include environmental training, pre-construction surveys and construction monitoring conducted by a qualified biologist, and several other avoidance and minimization measures, typically ensure a Covered Activity's potential impacts to bald and golden eagles while working on Covered Lands remain less than significant. In the unlikely event that non-

lethal "take" of these species occurs during Covered Activities conducted on Covered Lands, the activity would be covered under Tejon Ranch Conservancy's existing Incidental Take Permit. Additionally, Tejon Ranch has already mitigated for any loss of habitat resulting from Covered Activities conducted within Covered Lands designated for development by dedicating 240,000 acres of land to conservation. The lead agency should consult with Tejon Ranch Conservancy to establish whether the proposed Project qualifies as a Covered Activity.

In order to avoid and minimize potential Project-related impacts to bald and golden eagles, the Project proponent will implement similar protective measures to those required by the TUMSHCP. Implementation of general mitigation measure **GEN-1** listed above, requires each employee, worker, or visitor onsite to attend a mandatory training session, including printed educational materials regarding the conservation status of bald and golden eagles, laws protecting these species, penalties for violation of those laws, and a list of required protective measures that must be employed to avoid "take." In addition to the mandatory training, the Project proponent will ensure implementation of the following measures in all work areas:

> ***Mitigation Measure EAG-1a (Pre-construction Survey):*** If activities must occur within breeding season (February 1 to August 31), a qualified biologist shall conduct pre-construction surveys for eagle nests within 30 days prior to the start of construction. The survey shall include the proposed work area and surrounding lands within one mile. Eagle nests are considered "active" upon the nest-building stage. All detected eagle nests will be reported to CDFW and USFWS immediately.
>
> ***Mitigation Measure EAG-1b (Establish Buffers):*** On discovery of an eagle nest near work areas, the following no-disturbance buffers shall be maintained around each nest:
>
> > Bald Eagle: 660-foot no-disturbance buffer
> >
> > Golden Eagle: One-mile no-disturbance buffer
>
> ***Mitigation Measure EAG-1c: (Monitor):*** A qualified biological monitor will be present during all construction activities. If a bald or golden eagle is observed foraging or roosting within the viewshed of the construction activities, all work shall be halted until the individual leaves of its own volition.
>
> ***Mitigation Measure EAG-1d (Tree Surveys):*** If the Project proposes to remove any trees larger than 12 inches in diameter at breast height, a qualified biologist shall conduct a pre-construction survey prior to Project activities. The purpose of this survey will be to determine the tree's potential habitat value to resident or migratory bald and golden eagles. As part of this survey, the biologist will communicate with CDFW and USFWS regarding records of past nesting or roosting occurrences and receive guidance on determining the tree's potential value to bald and/or golden eagles. No known nest trees or preferred roosts will be removed or impacted until the Project proponent has completed consultation with CDFW and USFWS, received the appropriate permits, and adhered with required compensatory mitigation for the loss of nesting/roosting habitat.
>
> ***Mitigation Measure EAG-2 (Reporting):*** The Project proponent will be responsible for the following mandatory reporting requirements:
>
> > ***2a:*** All detected eagle nests will be reported to CDFW and USFWS. This includes any nest that has been used by a bald or golden eagle in the past or is being used currently as a primary or alternate nest site.
> >
> > ***2b:*** The discovery of any bald or golden eagle carcasses and any non-lethal or lethal incidental "take" of these species will be reported to CDFW and USFWS immediately.

In addition to potential compliance with the required measures of the TUMSHCP, the Tejon Ranch-Wide Agreement, and the Ranch-Wide Management Plan while working within the Covered Lands, implementation of mitigation measures **EAG-1a** through **EAG-2b** and mitigation measures **GEN-1**, and **BIRD-1a** listed above,

will avoid and minimize the Project's potential impacts to bald and golden eagles to a less than significant level under CEQA and NEPA and will ensure compliance with State and federal laws protecting these species.

3.3.5.6 Project-Related Impacts to Special Status Reptiles and Amphibians

As indicated in **Table 1** above, the following eight regionally occurring special status reptile and amphibian species could potentially occur within Project areas: California glossy snake (*Arizona elegans occidentalis*), California legless lizard (*Anniella* sp.), coast horned lizard (*Phrynosoma blainvillii*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), northern California legless lizard (*Anniella pulchra*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), Tehachapi slender salamander (*Batrachoseps stebbinsi*), western pond turtle and yellow-blotched salamander (*Ensatina eschscholtzii croceater*). Therefore, the Project's construction activities could potentially impact these eight special status species through injury, mortality, or loss of habitat. Of these eight species, the Tehachapi slender salamander is the only one protected by the endangered species act, as it is designated as "threatened" in California. California glossy snake, California legless lizard, coast horned lizard, coastal whiptail, northern California legless lizard, and San Joaquin coachwhip are all classified as California Species of Special Concern, and the yellow-blotched salamander is on the California Watch List. While potential impacts to these seven species should be analyzed in the Project's CEQA review, these species carry no legal status. Any Project-related impacts to listed (rare, threatened, or endangered) species are generally considered significant; however, analyses of impact significance to populations of non-listed species usually consider factors such as population-level effects, proportion of a taxon's range affected by a project, regional effects, and impacts to habitat features.

Covered Activities on TUMSHCP Covered Lands are required to comply with all of the adopted measures in the TUMSHCP, the Tejon Ranch-Wide Agreement, and the Ranch-Wide Management Plan, as described in **Sections 3.2.8** and **3.2.9** above. Compliance with these adopted measures, which include environmental training, pre-construction surveys and construction monitoring conducted by a qualified biologist in areas of suitable habitat, potential relocation of amphibians and reptiles encountered onsite, and several other avoidance and minimization measures, typically ensure a Covered Activity's potential impacts to special status amphibians and reptiles while working on Covered Lands remain less than significant. In the unlikely event that "take" of listed species occurs during Covered Activities conducted on Covered Lands, the activity would be covered under Tejon Ranch Conservancy's existing Incidental Take Permit. Additionally, Tejon Ranch has already mitigated for any loss of habitat resulting from Covered Activities conducted within Covered Lands designated for development by dedicating 240,000 acres of land to conservation. The lead agency should consult with Tejon Ranch Conservancy to establish whether the proposed Project qualifies as a Covered Activity.

Tehachapi Slender Salamander (California-Threatened)

Typical suitable habitat for Tehachapi slender salamander was not observed within the surveyed areas; however, suitable oak-dominated riparian habitats are present within one mile of FMHS and Frazier Mountain Park Road. Furthermore, several inundated drainages overgrown with riparian vegetation, which could be marginally suitable for this species, were observed along the perimeter of FMHS during the field survey. In order to ensure protection of Tehachapi slender salamander and associated habitat and/or compensate for a potential loss, it is recommended that the Project proponent proceed with focused surveys for this species. If Tehachapi slender salamander individuals or suitable habitat is detected onsite, the Project proponent will need to initiate consultation with CDFW and/or USFWS to determine if the loss would represent a significant impact and if that impact can be reduced or compensated for. These recommendations are not necessarily considered mitigation measures, because they should be completed well in advance of Project implementation, concurrent with the analysis of potential environmental impacts. Recommendations regarding next steps to are outlined below:

> ***Recommendation TSS-1 (Focused Survey):*** A qualified biologist/herpetologist shall conduct focused surveys for Tehachapi slender salamander individuals and suitable habitat. There are no accepted survey protocols for determining presence/absence of Tehachapi slender salamander or standardized methods to assess suitable habitat. Prior to initiating surveys, the biologist shall submit a resume, statement of qualifications, and proposed survey methodology to CDFW for approval.

Recommendation TSS-2 (Formal Consultation): If Tehachapi slender salamander individuals or suitable habitat is detected within Project work areas during the focused survey, the Project proponent shall initiate consultation with CDFW. If CDFW determines that "take" cannot be avoided, the Project proponent will be required to obtain an Incidental Take Permit (ITP) which will contain additional Project-specific mitigation measures, including required compensatory mitigation for loss of habitat.

Other Special Status Reptiles and Amphibians (California-Species of Special Concern; California-Watch List)

Project construction activities will result in temporary disturbance to potential suitable and/or occupied habitat for California glossy snake, California legless lizard, coast horned lizard, coastal whiptail, northern California legless lizard, San Joaquin coachwhip, western pond turtle and yellow-blotched salamander. Construction activities occurring within occupied habitat could result in injury, mortality, displacement, disturbance, or inhibit the movement of these species. However, as noted in **Section 3.3.3** above, the Project proponent will be required to coordinate vegetation clearing, grading, and re-planting/re-seeding efforts with CDFW, State of California Parks Department, and Kern County, at a minimum, in order to ensure that all impacts related to placement of the pipelines in areas of natural habitat remain temporary and are restored appropriately as soon as possible upon completion of construction. Furthermore, the Project's potential impact areas to natural lands that may be considered suitable and/or occupied habitat are limited to the approximately 1.7-mile alignment south of Frazier Mountain Park Road and west of I-5. The area of disturbance for this portion of the Project is estimated to be approximately 5.17 acres within an expanse of thousands of contiguous acres of protected habitat, including Los Padres National Forest and Hungry Valley State Vehicular Recreation Area, and TUMSHCP. Given the Project's small and temporary footprint, the Project's construction would not be expected to result in population-level effects and potential impacts to suitable habitat would be considered less than significant in nature.

Implementation of general mitigation measure **GEN-1** listed above, requires each employee, worker, or visitor onsite to attend a mandatory training session, including printed educational materials regarding the conservation status of special status amphibians and reptiles with potential to occur onsite, laws protecting these species, penalties for violation of those laws, and a list of required protective measures that must be employed to avoid "take" or other significant impacts. Implementation of general mitigation measures **GEN-3a** through **3c** listed above will avoid and minimize potential impacts to special status reptiles and amphibians by enforcing a vehicle speed limit and requiring mandatory inspections beneath vehicles prior to mobilization.

In addition to the mandatory training and required BMPs, the Project proponent will ensure implementation of the following measures in all work areas to avoid and minimize potential individual impacts to special status reptiles and amphibians during construction:

Mitigation Measure HERP-1a (Pre-construction Survey): A qualified biologist shall conduct a pre-construction survey of Project areas within 30 days prior to vegetation clearing or ground disturbing activities. Environmentally sensitive areas will be flagged for avoidance. If suitable habitat for regionally occurring special status reptiles and amphibians is detected on pre-construction surveys, construction monitoring will be required.

Mitigation Measure HERP-1b (Monitor): A qualified biologist will conduct a pre-activity clearance survey each day and remain onsite to oversee all vegetation clearing and ground disturbing activities conducted within suitable habitat for special status reptiles and amphibians. The biological monitor must possess required collecting/handling permits. If a special status reptile or amphibian is observed within Project areas, the biologist will stop work order and the individual will either be allowed to leave of its own volition or will be captured by the qualified biologist and relocated out of harm's way to the nearest suitable habitat beyond the influence of the Project work area. "Take" of listed (rare, threatened, or endangered) is prohibited. If a listed species is observed within the Project area, the biologist will stop work and contact the appropriate regulatory agency (CDFW and/or USFWS) for guidance on how to proceed.

In addition to potential compliance with the required measures of the TUMSHCP, the Tejon Ranch-Wide Agreement, and the Ranch-Wide Management Plan while working within the Covered Lands, implementation of mitigation measures **HERP-1a** through **HERP-1b** and mitigation measures **GEN-1**, and **GEN-3a** through **3c** listed above, will avoid and minimize the Project's potential impacts to California glossy snake, California legless lizard, coast horned lizard, coastal whiptail, northern California legless lizard, San Joaquin coachwhip, and yellow-blotched salamander to a less than significant level under CEQA and NEPA. The Project proponent is advised to implement recommendation **TSS-1** to determine the presence or absence of Tehachapi slender salamander individuals or suitable habitat, and initiate formal consultation with CDFW (Recommendation **TSS-2**) if it is determined that the Project could result in "take."

3.3.5.7 Project-Related Impacts to Special Status Fossorial Mammals

As indicated in **Table 1** above, the following fossorial mammals could potentially occur within Project areas: American badger and Tehachapi pocket mouse (*Perognathus alticola inexpectatus*). Therefore, the Project's construction activities could potentially impact these two special status species through injury, mortality, or loss of habitat. American badger and Tehachapi pocket mouse are both classified as Species of Special Concern in California, but neither is a listed (rare, threatened, or endangered) species and therefore they have no legal protection. Even in the absence of State and federal protection under the endangered species act, impacts to these species should be analyzed in the Project's CEQA review. While Project-related impacts to listed (rare, threatened, or endangered) species are generally considered significant; analyses of impact significance to populations of non-listed species usually consider factors such as population-level effects, proportion of a taxon's range affected by a project, regional effects, and impacts to habitat features.

Covered Activities on TUMSHCP Covered Lands are required to comply with all of the adopted measures in the TUMSHCP, the Tejon Ranch-Wide Agreement, and the Ranch-Wide Management Plan, as described in **Sections 3.2.8** and **3.2.9** above. Compliance with these adopted measures, which include environmental training, pre-construction surveys and construction monitoring conducted by a qualified biologist in areas of suitable habitat, potential relocation of special status species encountered onsite, and several other avoidance and minimization measures, typically ensure a Covered Activity's potential impacts to special status fossorial mammals while working on Covered Lands remain less than significant. In the unlikely event that "take" of listed species occurs during activities conducted on Covered Lands, the activity would be covered under Tejon Ranch Conservancy's existing Incidental Take Permit. Additionally, Tejon Ranch has already mitigated for any loss of habitat resulting from Covered Activities conducted within Covered Lands designated for development by dedicating 240,000 acres of land to conservation. The lead agency should consult with Tejon Ranch Conservancy to establish whether the proposed Project qualifies as a Covered Activity.

Project construction activities will result in temporary disturbance to potential suitable and/or occupied habitat for American badger and Tehachapi pocket mouse. Construction activities occurring within occupied habitat could result in injury, mortality, displacement, disturbance, or inhibit the movement of these species. However, as noted in **Section 3.3.3** above, the Project proponent will be required to coordinate vegetation clearing, grading, and re-planting/re-seeding efforts with CDFW, State of California Parks Department, and Kern County, at a minimum, in order to ensure that all impacts related to placement of the pipelines in areas of natural habitat remain temporary and are restored appropriately as soon as possible upon completion of construction. Furthermore, the Project's potential impact areas to natural lands that may be considered suitable and/or occupied habitat are limited to the approximate 1.7-mile alignment south of Frazier Mountain Park Road and west of I-5. The area of disturbance for this portion of the Project is estimated to be approximately 5.17 acres within an expanse of thousands of contiguous acres of protected habitat, including Los Padres National Forest and Hungry Valley State Vehicular Recreation Area, and TUMSHCP. Given the Project's small and temporary footprint, the Project's construction would not be expected to result in population-level effects and potential impacts to suitable habitat would be considered less than significant in nature.

Implementation of general mitigation measure **GEN-1** listed above, requires each employee, worker, or visitor onsite to attend a mandatory training session, including printed educational materials regarding the conservation status of special status fossorial mammals with potential to occur onsite, laws protecting these species, penalties

for violation of those laws, and a list of required protective measures that must be employed to avoid "take" or other significant impacts. Implementation of general mitigation measures **GEN-2** and **GEN-3a** through **3c** listed above will avoid and minimize potential impacts to special status fossorial mammals by limiting construction activities to daylight hours, enforcing a vehicle speed limit and requiring mandatory inspections beneath vehicles prior to mobilization.

In addition to the mandatory training, construction hours, and required BMPs, the Project proponent will ensure implementation of the following measures in all work areas to avoid and minimize potential individual impacts to special status fossorial mammals during construction:

> ***Mitigation Measure MAM-1a (Pre-construction Survey):*** A qualified biologist shall conduct a pre-construction survey of Project areas within 30 days prior to vegetation clearing or ground disturbing activities. Goals of this survey include a search for potentially active badger dens and suitable habitat within Project areas for American badger and Tehachapi pocket mouse. Environmentally sensitive areas will be flagged for avoidance. If potentially active badger dens or suitable habitat for regionally occurring special status fossorial mammals is detected on pre-construction surveys, construction monitoring will be required. Additional avoidance measures for denning American badgers will be required.
>
> ***Mitigation Measure MAM-1b (Camera Station):*** If potential dens with dimensions suitable for American badger (diameter of four (4) inches or greater) are detected during pre-construction surveys, each potential den will be monitored with remote camera stations for a period of three consecutive nights. If there is no activity at the den location recorded for three consecutive nights, the den can be deemed "inactive" or "unoccupied" and closed or excavated.
>
> ***Mitigation Measure MAM-1c (Den Avoidance):*** If an American badger is denning on or within 50 feet of the Project site, the Project proponent shall avoid the den by a minimum 50-foot buffer. If the 50-foot buffer cannot be maintained, the Project proponent will contact CDFW for guidance on how to proceed. Badgers will not be evicted from dens without CDFW consultation/coordination.
>
> ***Mitigation Measure MAM-1d (Monitor):*** A qualified biologist will conduct a pre-activity clearance survey each day and remain onsite to oversee all vegetation clearing and ground disturbing activities conducted within suitable habitat for special status fossorial mammals. The biological monitor must possess required collecting/handling permits. If a special status fossorial mammal is observed within Project areas, the biologist will stop work order and the individual will either be allowed to leave of its own volition or will be captured by the qualified biologist and relocated out of harm's way to the nearest suitable habitat beyond the influence of the Project work area. "Take" of listed (rare, threatened, or endangered) is prohibited. If a listed species is observed within the Project area, the biologist will stop work and contact the appropriate regulatory agency (CDFW and/or USFWS) for guidance on how to proceed.

In addition to potential compliance with the required measures of the TUMSHCP, the Tejon Ranch-Wide Agreement, and the Ranch-Wide Management Plan while working within the Covered Lands, implementation of mitigation measures **MAM-1a** through **MAM-1d** and mitigation measures **GEN-1**, **GEN-2**, and **GEN-3a** through **3c** listed above, will avoid and minimize the Project's potential impacts to American badger and Tehachapi pocket mouse to a less than significant level under CEQA and NEPA.

3.3.5.8 Project-Related Impacts to Special Status Invertebrates

As indicated in **Table 1** above, the Crotch bumble bee (*Bombus crotchii*) could potentially forage on flowering plants in Project areas. The Crotch bumble bee is a candidate for listing as an endangered species in California. As a candidate for listing, the species is temporarily afforded the same protections at State-listed endangered or threatened species until CDFW's status report is complete and a decision is made on the petitioned action. If the Fish and Game Commission finds that the petitioned action is not warranted, the species will be removed

from the list of candidate species; if the Commission finds that the petitioned action is warranted, the species will be formally added to the list of threatened or endangered species.

The Project will temporarily impact flowering vegetation that could serve as a food source for the Crotch bumble bee. However, as noted in **Section 3.3.3** above, the Project proponent will be required to coordinate vegetation clearing, grading, and re-planting/re-seeding efforts with CDFW, State of California Parks Department, and Kern County, at a minimum, in order to ensure that all impacts related to placement of the pipelines in areas of natural habitat remain temporary and are restored appropriately as soon as possible upon completion of construction. Furthermore, temporary disturbance to a linear section of vegetation within an expanse of otherwise untouched floral resources should not result in a significant loss of habitat or important resources for this species. According to the *Petition to the State of California Fish and Game Commission to List the Crotch bumble bee, Franklin's bumble bee (Bombus franklini), Suckley cuckoo bumble bee (Bombus suckleyi), and western bumble bee (Bombus occidentalis occidentalis) as Endnagered under the California Endangered Species Act*, the following factors pose a substantial threat to the survival of the four species of bumble bees included in the petition: present or threatened modification or destruction of habitat; overexploitation; competition; disease; pesticide use; genetic factors; and climate change. Activities related to modification or destruction of habitat of particular concern are agricultural intensification, urban development, fire and fire suppression, livestock grazing, landscaping, and the use of herbicides and pesticides (The Xerces Society for Invertebrate Conservation, Defenders of Wildlife, Center for Food Safety, 2018). The Project does not propose the permanent conversion of habitat or floral resources into agriculture, urban development, or ornamental landscaping, nor does the Project involve the use of pesticides, herbicides, livestock grazing, or any activities related to fire suppression. Therefore, the Project is not expected to result in habitat loss or long-term or population-level impacts.

Like most species of bumble bee, the Crotch bumble bee typically nests in the ground in burrows, beneath loose soil or leaf litter, or in abandoned burrows. If a colony of Crotch bumble bees were nesting or overwintering in the Project area during ground disturbing activities, the nesting colony or overwintering queens could be destroyed during excavation or grading. Nesting colonies and overwintering queens would likely be undetectable on a pre-construction survey. Incidental impact to individual bees from the Project's construction-related ground disturbance activities would not be expected to result in a significant impact to this species on a population level, and implementation of the Project would not result in a permanent loss of habitat; however, pursuant to definitions of CESA, Project-related impacts to individuals would be considered "take" which would represent a significant impact under CEQA. There are no standard accepted avoidance and minimization measures for this species, and a limited operating period would not adequately avoid potential impacts since overwintering queens could be present during winter months and underground nests could be present Spring through Fall. The Project proponent is advised to implement the following recommendation as part of the Project's CEQA review:

> ***Recommendation BEE-1 (Consultation):*** The Project proponent should contact CDFW for guidance regarding the Project's potential impacts to the State-Candidate for Endangered Status Crotch bumble bee and feasible avoidance and minimization measures. If CDFW determines that "take" cannot be avoided, the Project proponent may be required to obtain an Incidental Take Permit.

3.3.6 Project-Related Impacts to Roosting Bats and Special Status Bats

As explained in **Table 1**, the Townsend's big-eared bat (*Corynorhinus townsendii*), a California Species of Special Concern, could roost within trees onsite or forage over Project areas. As explained in sections above, California Species of Special Concern do not have legal protection under CESA; however, impacts to these species should be analyzed in the Project's CEQA review. This is particularly true for bat species, because Project-related impacts to roosting bats and maternal colonies is considered a significant impact under CEQA. There are some scattered oak and cotton trees along and near the Project's proposed alignment. Removal of one tree within a swath of other suitable roosting habitat would not be considered a significant loss of potential bat roosts; however, disturbance to maternal colonies or improper eviction of bats from roosts resulting in injury, mortality, or affecting reproductive success would be considered significant.

Implementation of general mitigation measure **GEN-2** limits construction activities to daylight, which will avoid and minimize potential impacts to foraging bats. Implementation of the following mitigation measures would avoid and minimize potential impacts to roosting bats, including special status bats, to a less than significant level:

> ***Mitigation Measure BAT-1a (Pre-construction Survey):*** A qualified biologist will conduct pre-construction bat surveys within 30 days prior to the start of construction activities. Goals of this survey include detection of bat roosts within 100 feet of the Project areas. Acceptable methods of detection include the use of bat a detection device, waiting for evening emergence or morning return, or observation of the presence of individuals or sign (staining or guano).
>
> ***Mitigation Measure BAT-1b (Avoidance):*** Where feasible, a 100-foot no-disturbance buffer will be enforced around active bat roosts. If this buffer cannot be maintained, the Project proponent shall contact CDFW for guidance on how to proceed.
>
> ***Mitigation Measure BAT-1c (Roost Replacement):*** Prior to removal of any trees larger than four (4) inches in diameter at breast height, a qualified biologist shall carefully inspect the tree for any potential bat roosts using the acceptable methods described in BAT-1a. If roosting bats or maternal colonies are detected within a tree planned for removal, the Project proponent shall stop work and initiate consultation with CDFW. Bats will not be evicted from roosts without first receiving approval from CDFW. If bats are evicted, the Project proponent shall provide replacement roosts at a ratio determined by CDFW.

3.3.7 Project-Related Impacts to Wildlife Movement Corridors and Native Nursery Sites

Potential impacts to migratory birds, nesting birds, roosting bats and maternal roosts, and special status fossorial mammals were discussed in the preceding sections. As mentioned, potential impacts to native nursery sites associated with special status fossorial mammals, bat maternity roosts, nesting birds, and migratory birds would be less than significant with implementation of the recommended mitigation measures listed in each section. The Project is located within the Pacific flyway, a major transportation corridor for migratory birds; however, migrating birds will continue to fly over the Project site during construction and after completion of the Project. Additional discussion regarding potential impacts to wildlife movement corridors will be discussed below.

The Project runs through a mountainous area and crosses several potential wildlife movement corridors within ridges, valleys, and streams. There are four potential east-west crossings along the I-5 in the Project's vicinity: the Lebec Service Road overpass, an underpass at Cuddy Creek, an underpass at Frazier Mountain Park Road, and a bridge over I-5 approximately 0.75 miles east of FMHS. There are multiple potential movement corridors stemming from each crossing and following creeks, ridges, and valleys.
As discussed in **Section 2.7** above, "Deer Crossing" signs were observed, and the carcass of a mule deer was present along Frazier Mountain Park Road. Creek beds of unnamed water features cross the Project site in multiple locations, which could serve as a corridor for wildlife inhabiting the surrounding sagebrush shrubland and grassland habitat. Even developed portions of the site that are frequently subject to human-related disturbance would be expected to be utilized as a wildlife movement corridor because this region offers an important linkage between patches of suitable habitat. In fact, large portions of the Project area are mapped as Essential Connectivity Areas.

The Project does not involve the construction of any fences or permanent above ground linear features that could act as a barrier for movement; however, temporary construction fencing or linear areas of excavation associated with placement of the proposed pipelines could temporarily inhibit wildlife dispersal or migratory movement patterns. In order to avoid and minimize the Project's potential construction-related impacts to wildlife movement corridors, the following mitigation measures shall be implemented:

Mitigation Measure MOVE-1 (Wildlife Compatible Fencing): If temporary construction fencing is required, the Project proponent shall submit a proposed fencing plan to CDFW for review at least 60 days prior to initiating construction activities. Fencing must have gaps large enough for various species of wildlife to pass through or over, must not have sharp edges that could injure wildlife, and must not have potential for entanglement. CDFW must provide written approval of the proposed fencing prior to installation.

Mitigation Measure MOVE-2 (Cover Excavations): Excavations shall be covered each night to prevent wildlife from falling in and becoming trapped or injured during migratory or dispersal movements.

Implementation of the above mitigation measures, in addition to those already mentioned in sections above will reduce the Project's potential impacts to native wildlife nursery sites and wildlife movement corridors to a less than significant level.

3.4 Less Than Significant Project-Related Impacts

3.4.1 Project-Related Impacts to Special Status Plant Species Absent from or Unlikely to Occur Onsite

31 regionally occurring special status plant species were identified on the CNDDB and IPaC queries of the Project area and surrounding lands, including: Abrams' oxytheca (*Acanthoscyphus parishii var. abramsii*), Baja navarretia (*Navarretia peninsularis*), Bakersfield cactus (*Opuntia basilaris var. treleasei*), Big Bear Valley woollypod (*Astragalus leucolobus*), calico monkeyflower (*Diplacus pictus / Mimulus pictus / Eunanus pictus*), California Orcutt grass (*Orcuttia californica*), Davidson's bush-mallow (*Malacothamnus davidsonii*), delicate bluecup (*Githopsis tenella*), Fort Tejon woolly sunflower (*Eriophyllum lanatum var. hallii*), Greata's aster (*Symphyotrichum greatae*), grey-leaved violet (*Viola pinetorum ssp. grisea*), Horn's milk-vetch *(Astralagus hornii var. hornii),* Kern Mallow *(Eremalche parryi ssp. kernensis),* Lemmon's jewelflower (*Caulanthus lemmonii*), Lost Hills crownscale *(Atriplex coronata var. vallicola),* Madera leptosiphon (*Leptosiphon serrulatus*), Mt. Gleason paintbrush (*Castilleja gleasoni*), Mt. Pinos onion (*Allium howellii var. clokeyi*), pale-yellow layia *(Layia heterotricha),* Palmer's mariposa-lily (*Calochortus palmeri var. palmeri*), Piute Mountains navarretia (*Navarretia setiloba*), Robbins' nemacladus (*Nemacladus secundiflorus var. robbinsii*), salt spring checkerbloom (*Sidalcea neomexicana*), San Bernardino aster (*Symphyotrichum defoliatum*), short-joint beavertail (*Opuntia basilaris var. brachyclada*), slender mariposa-lily (*Calochortus clavatus var. gracilis*), spreading navarretia (*Navarretia fossalis*), Tehachapi buckwheat (*Eriogonum callistum*), Tehachapi monardella (*Monardella linoides ssp. oblonga*), Tejon poppy *(Eschscholzia lemmonii ssp. kernensis),* and Tracy's eriastrum (*Eriastrum tracyi*). As explained in **Table 2**, the following nine plant species have been determined to be absent from the Project due to the Project's location outside of the accepted geographic or altitudinal range and/or the absence of suitable habitat onsite: Abrams' oxytheca, Bakersfield cactus, California Orcutt grass, grey-leaved violet, Kern Mallow*,* Lost Hills crownscale*,* Madera leptosiphon, Mt. Gleason paintbrush, and spreading navarretia. Similarly, the following seven species were determined to be unlikely to occur onsite: Baja navarretia, delicate bluecup, Greata's aster, Horn's milk-vetch*,* Tehachapi buckwheat, Tehachapi monardella, and Tejon poppy. Since there is little to no likelihood of these 16 special status plant species occurring onsite, implementation of the Project should have no effect on individual plants or populations of these species. Mitigation measures are not necessary to avoid impacts to these 16 species; however, the focused botanical surveys recommended in **Section 3.3.3** above, will provide protection to these species in the unlikely event they are detected onsite.

As explained in **Table 2**, occurrence of the remaining 15 special status plant species is possible or likely within Project areas. Therefore, as discussed in **Section 3.3.3** above, Protocol-level botanical surveys should be conducted of the Project area to quantify impacts to all special status plants and natural communities, including the following 15 species: Big Bear Valley woollypod, calico monkeyflower, Davidson's bush-mallow, Fort Tejon woolly sunflower, Lemmon's jewelflower, Mt. Pinos onion, pale-yellow layia*,* Palmer's mariposa-lily, Piute Mountains navarretia, Robbins' nemacladus, salt spring checkerbloom, San Bernardino aster, short-joint beavertail, slender mariposa-lily, and Tracy's eriastrum.

3.4.2 Project-Related Impacts to Special Status Animal Species Absent From, or Unlikely to Occur Onsite

As explained in **Table 1**, of the 45 regionally occurring special status animal species, 19 were determined to be absent from or unlikely to occur in the vicinity due to Project's location outside of the accepted geographic or altitudinal range and/or the absence of suitable habitat onsite, including: arroyo toad (*Anaxyrus californicus*), blunt-nosed leopard lizard (*Gambelia sila*), California red-legged frog (*Rana draytonii*), coastal California gnatcatcher (*Polioptila californica californica*), conservancy fairy shrimp (*Branchinecta conservatio*), foothill yellow-legged frog (*Rana boylii*), green sea turtle (*Chelonia mydas*), least Bell's vireo (*Vireo bellii pusillis*), Mount Pinos sooty grouse (*Dendragapus fuliginosus howardi*), Nelson's antelope squirrel (*Ammospermophilus nelsoni*), pallid bat (*Antrozous pallidus*), Riverside fairy shrimp (*Streptocephalus wootoni*), San Joaquin kit fox (*Vulpes macrotis mutica*), southern rubber boa (*Charina umbratical*), southwestern willow flycatcher (*Empidonax traillii extimus*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), two-striped gartersnake (*Thamnophis hammondii*), vernal pool fairy shrimp (*Branchinecta lynchi*), and western spadefoot (*Spea hammondii*). Since it is highly unlikely that these species would occur onsite, implementation of the Project should have no impact on these 19 special status species through construction mortality, disturbance, or loss of habitat. Mitigation measures are not warranted.

3.4.3 Project-Related Impacts to Critical Habitat

Designated critical habitat is absent from the Project area. Therefore, there will be no impact to critical habitat, and mitigation is not warranted.

3.4.4 Coastal Zone and Coastal Barriers Resources Act

The Project is not located within the coastal zone. The Project will not impact or be located within or near the Coastal Barrier Resources System or its adjacent wetlands, marshes, estuaries, inlets, and near-shore waters. Mitigation is not warranted.

3.4.5 Project-Related Impact to Essential Fish Habitat

Essential Fish Habitat (EFH) and Habitat Areas of Particular Concern (HAPC) are absent from the Project area and surrounding lands, and consultation with the National Marine Fisheries (NMFS) Service will not be required. Query results of the NMFS EHF Mapper can be found in **Appendix D** at the end of this document. Mitigation is not warranted.

3.5 Section 7 Determination

In addition to the effects analysis performed in the preceding sections of this document, **Table 3** summarizes Project effect determinations for Federally Listed Species found on the USFWS IPaC list (**Appendix C**) and on the CNDDB query (**Appendix B**) conducted on October 3, 2019 in accordance with Section 7 of the Endangered Species Act.

Table 3. Section 7 Determinations

Identified by IPaC		
Species	**Determination**	**Rationale for Determination**
San Joaquin kit fox (*Vulpes macrotis mutica*)	**No effect**	Project area is outside of the known distribution range of this species.
California condor (*Gymnogyps californianus*)	**May affect, not likely to adversely affect**	Nesting and roosting habitat absent from Project area. Project proponent required to implement avoidance and minimization measures specific to this species.
blunt-nosed leopard lizard (*Gambelia sila*)	**No effect**	Habitat absent. Project area is outside of the known distribution range of this species.
least Bell's vireo (*Vireo bellii pusillus*)	**No effect**	Project area outside known distribution range of this species.
southwestern willow flycatcher (*Empidonax traillii extimus*)	**No effect**	Project area outside known distribution range of this species.
California red-legged frog (*Rana draytonii*)	**No effect**	Habitat absent
green sea turtle (*Chelonia mydas*)	**No effect**	Habitat absent. Project area is outside of the known distribution range of this species.
Riverside fairy shrimp (*Streptocephalus woottoni*)	**No effect**	Habitat absent
vernal pool fairy shrimp (*Branchinecta lynchi*)	**No effect**	Habitat absent
California Orcutt grass (*Orcuttia californica*)	**No effect**	Project area is outside of the known distribution range of this species.
spreading navarretia (*Navarretia fossalis*)	**No effect**	Project area is outside of the known distribution range of this species.
Additional Federally Listed Species Identified by CNDDB		
arroyo toad (*Anaxyrus californicus*)	**No effect**	Project area is outside of the known distribution range of this species.
coastal California gnatcatcher (*Polioptila californica californica*)	**No effect**	Project area is outside of the known distribution range of this species.
conservancy fairy shrimp (*Branchinecta conservatio*)	**No effect**	Habitat absent
Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*)	**No effect**	Project area is outside of the known distribution range of this species.
Bakersfield cactus (*Opuntia basilaris var. treleasei*)	**No effect**	Project area is outside of the known distribution range of this species.
Kern mallow (*Eremalche parryi ssp. kernensis*)	**No effect**	Project area is outside of the known distribution range of this species.

4 References

(2020). Retrieved from iNaturalist.org web application: http://www.inaturalist.org

Artemisia tridentata Shrubland Alliance (Big Sagebrush). (2020). Retrieved from California Native Plant Society: A Manual of California Vegetation: http://vegetation.cnps.org/alliance/142

Baldwin, B., Goldman, D. H., Keil, D., Patterson, R., Rosatti, T., & Wilken, D. (2012). *The Jepson Manual; Vascular Plants of California, second edition.* Berkeley: University of California Press.

Bell, H., Alvarez, J., Eberhardt, L., & Ralls, K. (1994). *Distribution and Abundance of San Joaquin Kit Fox; Draft Final Report to the Department of Fish and Game.*

Calflora. (2020). Retrieved from Calflora: Information on California Plants for Education, Research and Conservation: http://www.calflora.org/

California Department of Fish and Wildlife. (2004, May). *Approved Survey Methodology for the Blunt-Nosed Leopard Lizard.*

California Department of Fish and Wildlife. (2012). *Staff Report on Burrowing Owl Mitigation.*

California Department of Fish and Wildlife. (2020). Retrieved from California Wildlife Habitat Relationships (CHWR): https://www.wildlife.ca.gov/Data/CWHR

California Department of Fish and Wildlife. (2020, January). *California Natural Diversity Database*.

California Native Plant Society. (2020). Retrieved from Inventory of Rare and Endangered Vascular Plants of California: http://www.rareplants.cnps.org/

California State Parks Department. (2017). *Hungry Valley State Vehicular Recreation Area General Plan Update + EIR: Public Outreach Summary; Public Input Synthesis #1.* California State Parks Department.

California State Parks: Off-Highway Motor Vehicle Recreation Division. (2008). *2008 Grants and Cooperative Agreements Program Regulations: 2008 Soil Conservation Standard and Guidelines.* California State Parks.

CDFW. (1975). San Joaquin kit fox distribution and abundance in 1975. *California Department of Fish and Game, Wildlife Management Branch Administartive Report No. 75-3*.

CDFW. (2018, March). Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. California.

Cypher, B., Phillips, S., & Kelly, P. (2013). Quantity and Distribution of Suitable Habitat for Endangered San Joaquin Kit Foxes: Conservation Implications. *Canid Biology & Conservation 16(7):25-31*.

Cypher, B., Van Horn Job, C., Tennant, E., & Phillips, S. (2010). *Mammalian Species Surveys in the Aquisition Areas on Tejon Ranch, California.* Turlock, California: CSU Stanislaus, Endangered Species Recovery Program.

Decsion 9838. (1941, July 1). In the Matter of Application 9838 of Fred A. Ramsey to Appropriate from Two Unnamed Springs in Coal Pit Canyon, Tributary to Cuddy Creek in Kern County. Kern County, California: SWRCB.

Dudek & USFWS. (2013). *Tehachapi Uplands Multiple Species Habitat Conservation Plan.* Lebec, California.

DWR. (2003). *California Groundwater; Bulletin 118: Castac Lake Valley Groundwater Basin.* DWR.

DWR. (2003). *California's Groundwater; Bulletin 118: Cuddy Canyon Valley Groundwater Basin.* DWR.

DWR. (2020). Retrieved from Groundwater Basin Boundary Assessment Tool (BBAT): http://gis.water.ca.gov/app/bbat/

eBird, Cornell Lab of Ornithology. (2020). Retrieved from eBird: An online database of bird distribution and abundance: https://ebird.org/

EPA. (2019, November). Retrieved from Waters GeoViewer: https://www.epa.gov/waterdata/waters-geoviewer

Impact Sciences, Inc. (2008). *Jurisdictional Delineation Report for Tejon Mountain Village.* Lebec: Tejon Mountain Village.

Jepson Flora Project (eds.). (2020). Retrieved from Jepson eFlora: http://ucjeps.berkeley.edu/eflora/

Kern County Planning Department. (2003). *Frazier Park/Lebec Specific Plan.* Kern County.

Kern County Planning Department. (2009). *Frazier Park Estates: Recirculated Draft Environmental Impact Report (SCH#2003111106).* Kern County.

Kern County Planning Department. (2009). *Kern County General Plan.* Bakersfield, California: Kern County.
Kern County Planning Department. (2009). Recirculated Draft EIR. *Frazier Park Estates (SCH#2003111106).* Bakersfield, California.
Kern County Planning Department. (2009). *Tejon Mountain Village Specific and Community Plan.* Bakersfield, California: Kern County Planning Department.
Kern County Planning Department. (2009). Tejon Mountain Village Specific and Community Plan EIR (SCH#2005101018). Bakersfield, California.
Live Oak Associates. (2011). *Reconnaissance Surveys; Amphibian and Reptile Species; Tejon Ranch Conservancy Aquisiton Areas.* Live Oak Associates.
Los Angeles County. (2015). *Los Angeles County General Plan 2035.*
Mayence, C., Jensen, N., Kramer, N., Pavliscak, L., & White, M. (2017). Tejon Ranch- Land of Contrast, Botanical Richness, and Ongoing Discovery. *Fremontia: Journal of the California Native Plant Society*, Vol. 45, Nos. 1 & 2 (pp 25-29).
Mayer, K., & Laudenslayer Jr, W. (1988). *A Guide to Wildlife Habitats of California.* Sacramento, CA: State of CAlifornia Resources Agency, Department of Fish and Game. Retrieved from CDFW: California Wildlife Habitat Relationships System.
Morrell, S. (1972). Life History of the San Joaquin kit fox. *California Fish and Game*, 58:162-174.
Nafis, G. (2020). Retrieved from CaliforniaHerps: A Guide to the Amphibians and Reptiles of California: http://www.californiaherps.com/
NatureServe Explorer. (2020). *An Online Encyclopedia of Life.* Retrieved from http://explorer.natureserve.org/
NOAA Habitat Conservation. (2019, October). Essential Fish Habitat Mapper.
Oak Woodlands Habitat Conservation Strategic Alliance. (2011). *Los Angeles County Oak Woodlands Conservation Management Plan Guide.* Los Angeles County.
Off-Highway Motor Vehicle Recreation Commission. (2017). *Off-Highway Motor Vehicle Recreation Commission Program Report.* California State Parks Department.
Pagel, J., Whittington, D., & Allen, G. (2010). *Interim Golden Eagle Inventory and monitoring protocols; and other recommendations.* Division of Migratopry Bird Management, USFWS.
Sandoval, T., Johnson, C., & Williams, D. (2019, December). *Blunt-nosed leopard lizard (Gambelia sila) Species Profile.* Retrieved from CSU Stanislaus, Endangered Species Recovery Program: https://esrp.csustan.edu/speciesprofiles/profile.php?sp=gasi
Shuford, W., & Gardali, T. (2008). *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. .* Camarillo and Sacramento, CA: Western Field Ornithologists and California Department of Fish and Game.
Smith, D., Ralls, K., Cypher, B., Clark Jr., H., Kelly, P., Williams, D., & Maldonado, J. (2006). Relative Abundance of Endangered San Joaquin Kit Foxes (Vulpes macrotis mutica) Based on Scat-detection Dog Surveys. *The Southwestern Naturalist 51 (2)*, 210-219.
State of California Resources Agency: Department of Parks and Recreation. (1981). *Hungry Valley State Vehicular Recreation Area: General Plan.* Sacramento, California: State of California Resources Agency: Department of Parks and Recreation.
SWRCB. (2020, January). *Stream Systems Declared Fully Appropriated By the State Water Board.* Retrieved from https://gispublic.waterboards.ca.gov/portal/apps/MapJournal/index.html?appid=b2188e89dfea4e44b156600370f1edf7
Tejon Ranch Conservancy. (2013). *Ranch-wide Management Plan.* Frazier Park, California: Tejon Ranch Conservancy.
The California Burrowing Owl Consortium. (1993). *Burrowing Owl Survey Protocol and Mitigation Guidelines.*
The Xerces Society for Invertebrate Conservation, Defenders of Wildlife, Center for Food Safety. (2018, October). A Petition to the State of California Fish and Game Commission to List. *The Crotch bumble bee (Bombus crotchii), Franklin's bumble bee (Bombus franklini), Suckley cuckoo bumble bee (Bombus suckleyi), and western bumble bee (Bombus occidentalis occidentalis) as Endangered under the California Endangered Species Act.*
Town & Country. (2015). *Antelope Valley Area Plan.* Los Angeles County: LA County Board of Supervisors.
U.S. Army Corps of Engineers. (1987). *Corps of Engineers Wetlands Delineation Manual.* Department of the Army.

U.S. Department of Agriculture, Natural Recources Conservation Service. (2020). *The Plants Database*. Retrieved from http://plants.sc.egov.usda.gov/java/

U.S. Department of Agriculture, Natural Resources Conservation Service. (2020). *Custom Soil Resources Report, California*. Retrieved from http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

U.S. Fish and Wildlife Service. (1998). *Recovery Plan for Upland Species of the San Joaquin Valley, California*.

U.S. Fish and Wildlife Service. (2010, February). *Blunt-Nosed Leopard Lizard (Gambelia Sila) 5-Year Review: Summary and Evaluation*. Sacramento, California.

U.S. Fish and Wildlife Service. (2012). *Final Environmental Impact Statement for the Tehachapi Uplands Multiple Species Habitat Conservation Plan.* Ventura, California: USFWS.

U.S. Fish and Wildlife Service. (2020). *Environmental Conservation Online System (ECOS)*. Retrieved from https://ecos.fws.gov/ecp/

U.S. Fish and Wildlife Service. (2020). *Information on Planning and Consultation (IPaC)*. Retrieved from https://ecos.fws.gov/ipac/

United States Fish and Wildlife Service. (1998). *Draft Recovery Plan for the least Bell's vireo.* Portland, OR: USFWS.

USDA Forest Service. (2020, January). *Los Padres National Forest*. Retrieved from https://www.fs.usda.gov/detail/lpnf/learning/nature-science/?cid=fsm9_034063

USFWS. (2007, May). National Bald Eagle Management Guidelines. USFWS.

USFWS. (2010). *Coastal California Gnatcatcher (polioptila californica californica) 5-year Review: Summary and Evaluation.* Carlsbad, California: USFWS.

USFWS. (2010). *San Joaquin kit fox (Vulpes macrotis mutica); 5-Year Review: Summary and Evaluation.* Sacramento: USFWS.

USFWS Pacific Southwest Region; Migratory Birds Program. (2017, December). Recommended Buffer Zones for Ground-based Human Activities around Nesting Sites of Golden Eagles in California and Nevada.

USFWS Pacific Southwest Region; Migratory Birds Program. (2017, December). Recommended Buffer Zones for Human Activities Around Nesting Sites of Bald Eagles in California and Nevada.

White, M. (2016, January). *A New Plant List for Tejon Ranch*. Retrieved from Tejon Ranch Conservancy: http://tejonconservancy.blogspot.com/2016/01/a-new-plant-list-for-tejon-ranch.html

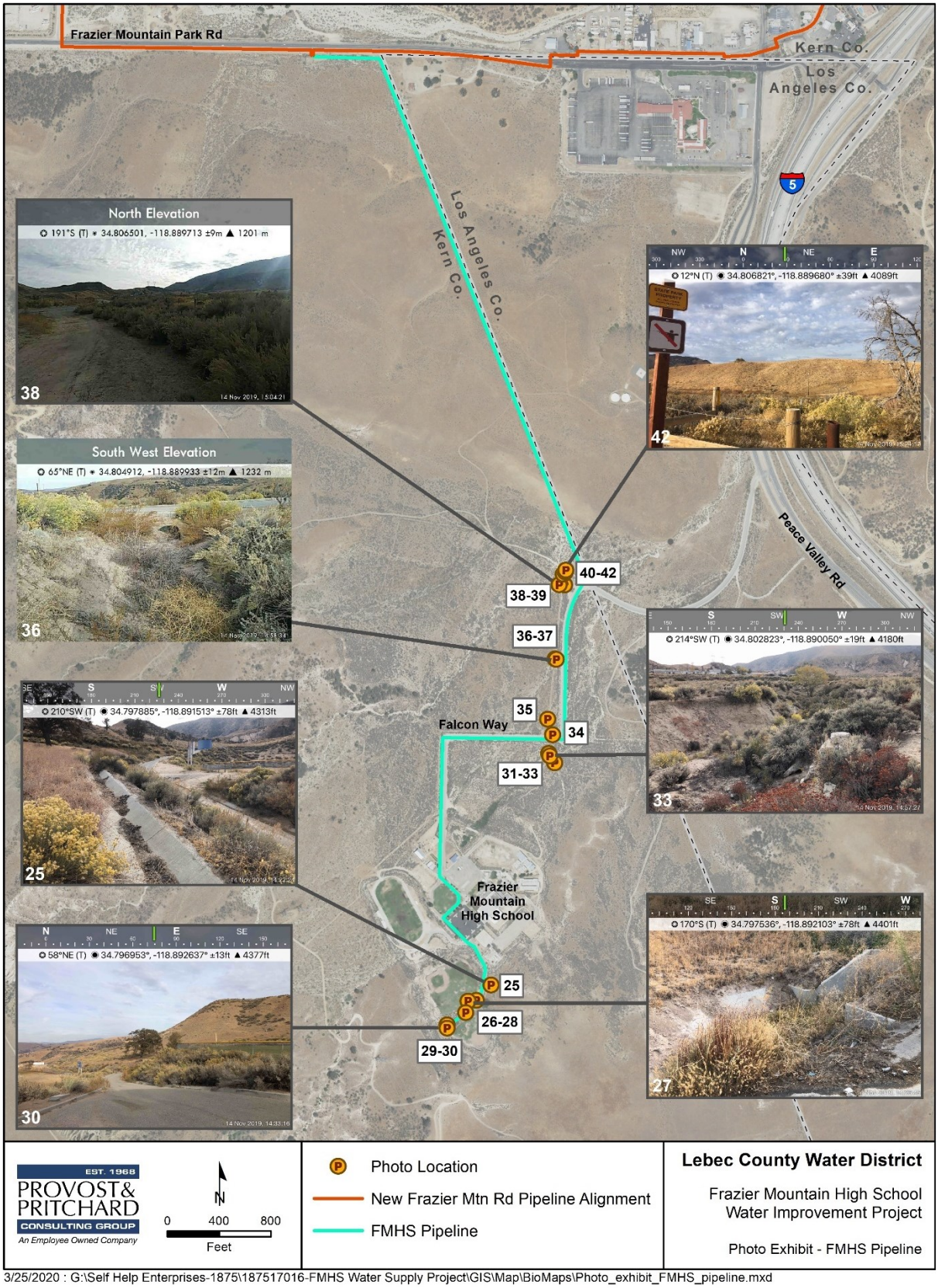
WRO 98-08, O. W. (1998, November). In the Matter of the Declaration of Fully Appropriated Stream Systems in California. California: SWRCB.

Appendix A. Selected Photographs of the Project Site



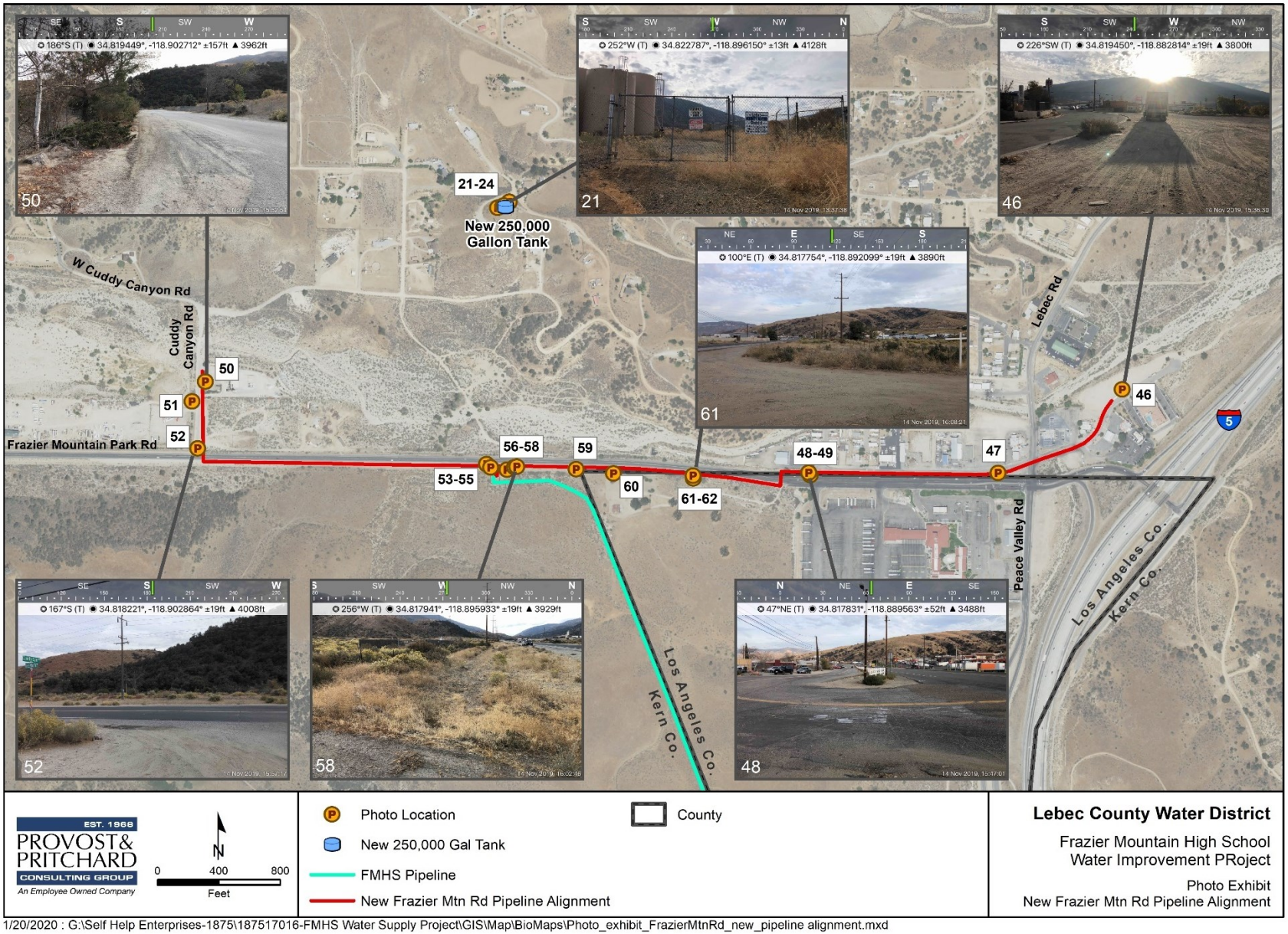
3/26/2020 : G:\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\BioMaps\Photo_exhibit_well_site.mxd

Photo Exhibit 1. Lebec Well 04 Site and Nearby Pipeline



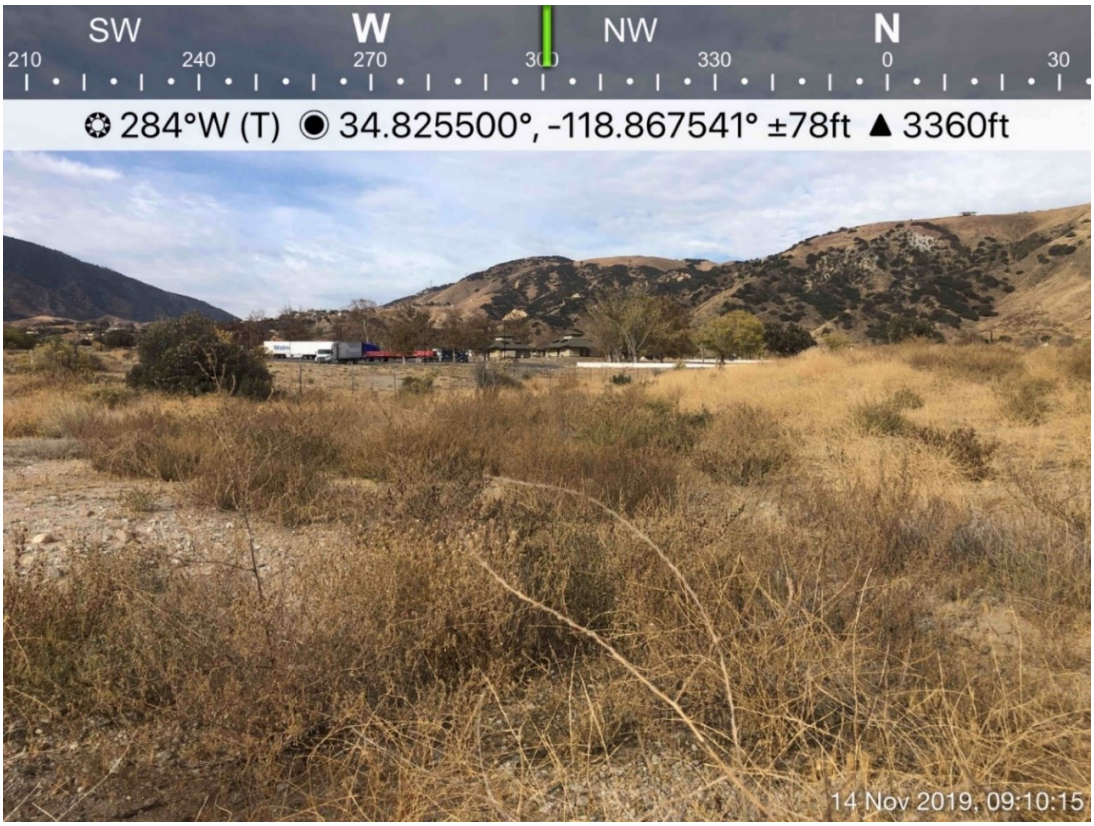
3/25/2020 : G:\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\BioMaps\Photo_exhibit_FMHS_pipeline.mxd

Photo Exhibit 2. FMHS Pipeline

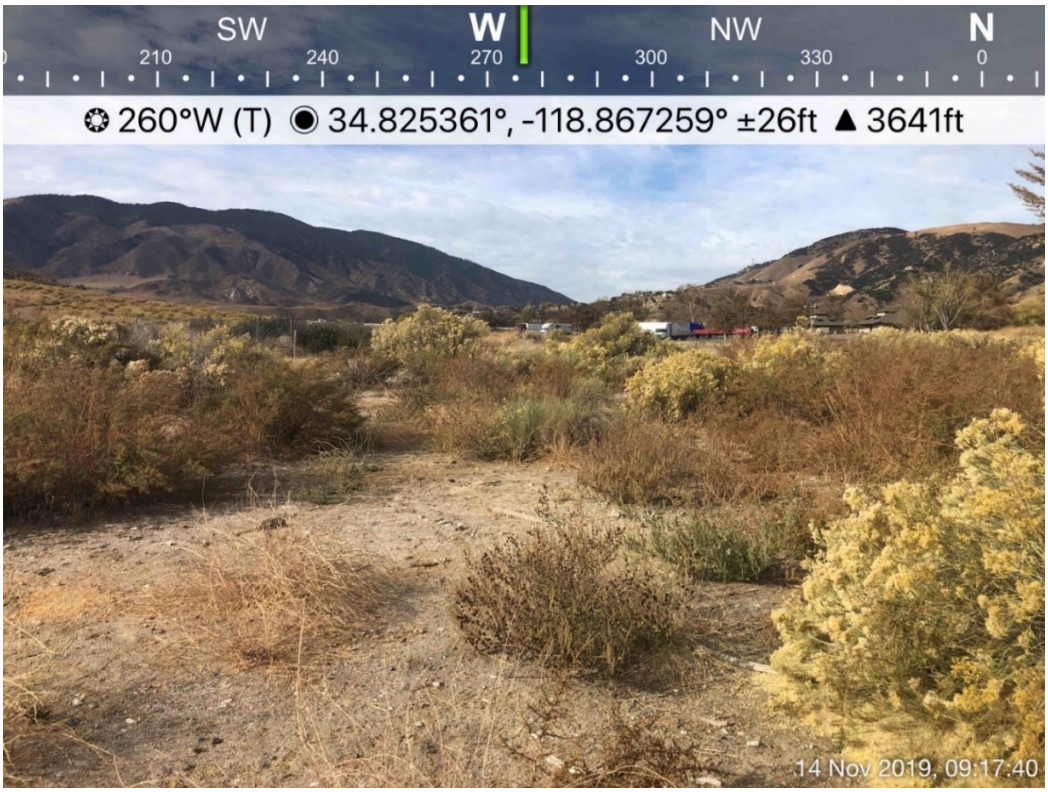


1/20/2020 : G:\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\BioMaps\Photo_exhibit_FrazierMtnRd_new_pipeline alignment.mxd

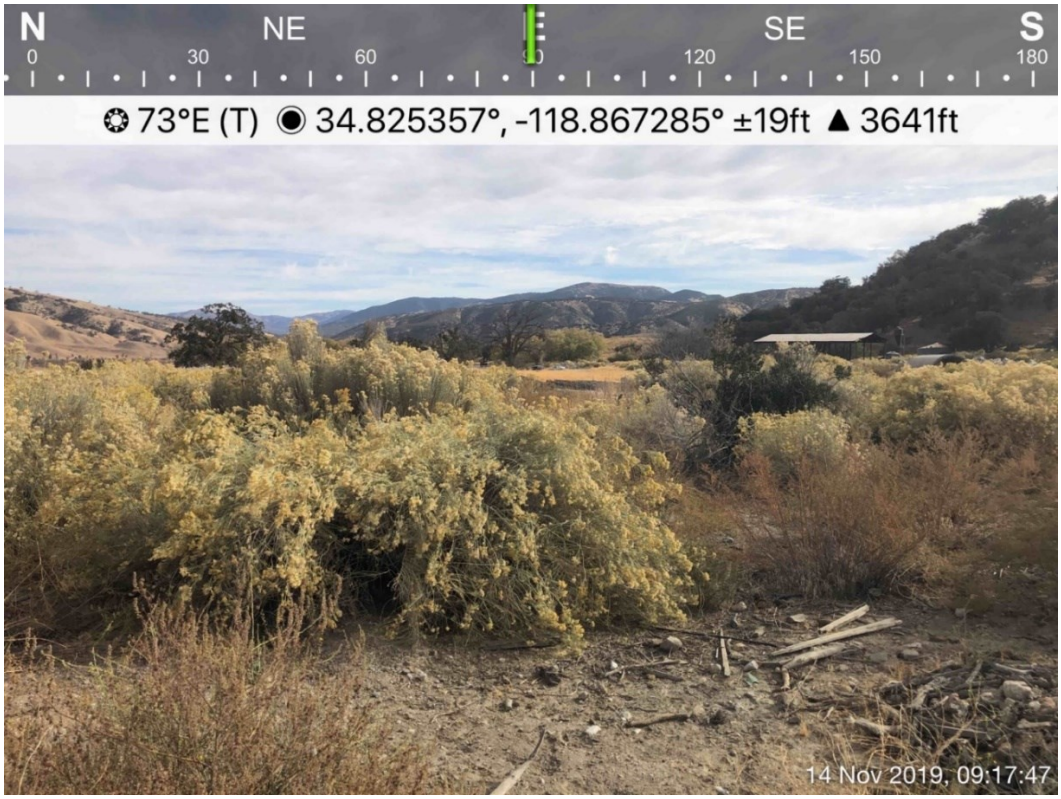
Photo Exhibit 3. Frazier Mountain Road Pipeline



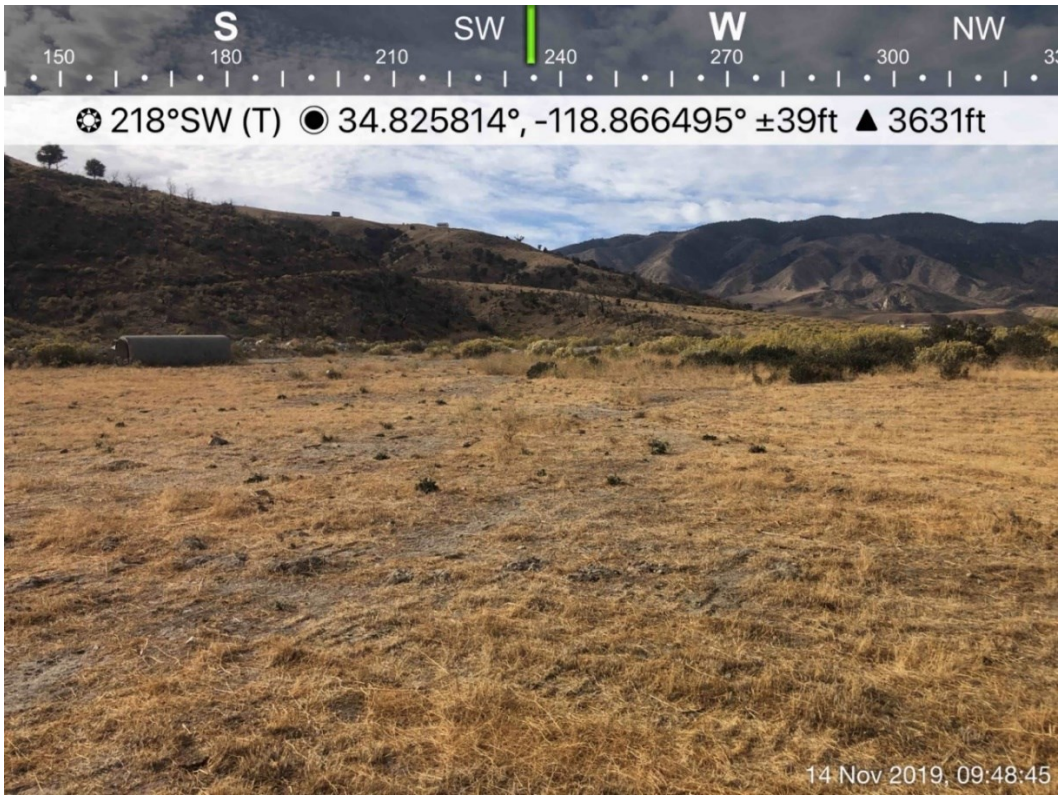
Photograph 1: Overview of the ruderal-annual grassland habitat along the Lebec well alignment facing the rest area.



Photograph 2: Overview of the sagebrush shrubland habitat along the Lebec well alignment facing the rest area.



Photograph 3: Overview of the sagebrush shrubland habitat along the Lebec well alignment facing east.



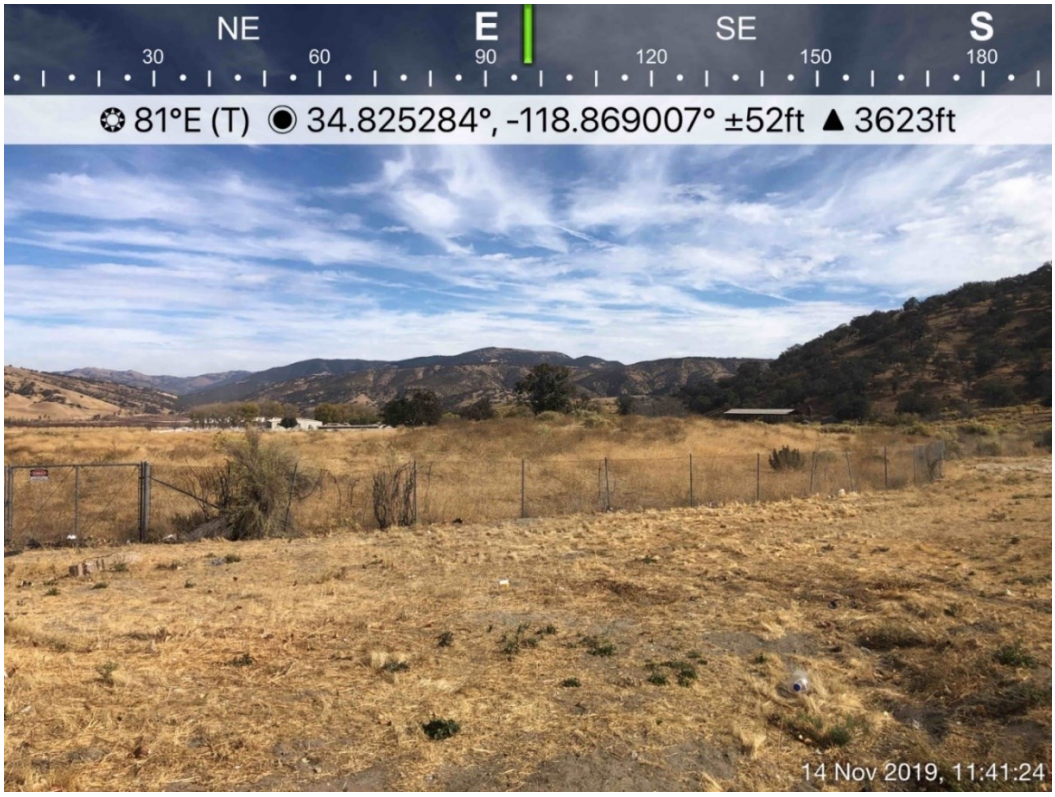
Photograph 4: Overview of the Lebec Well site.



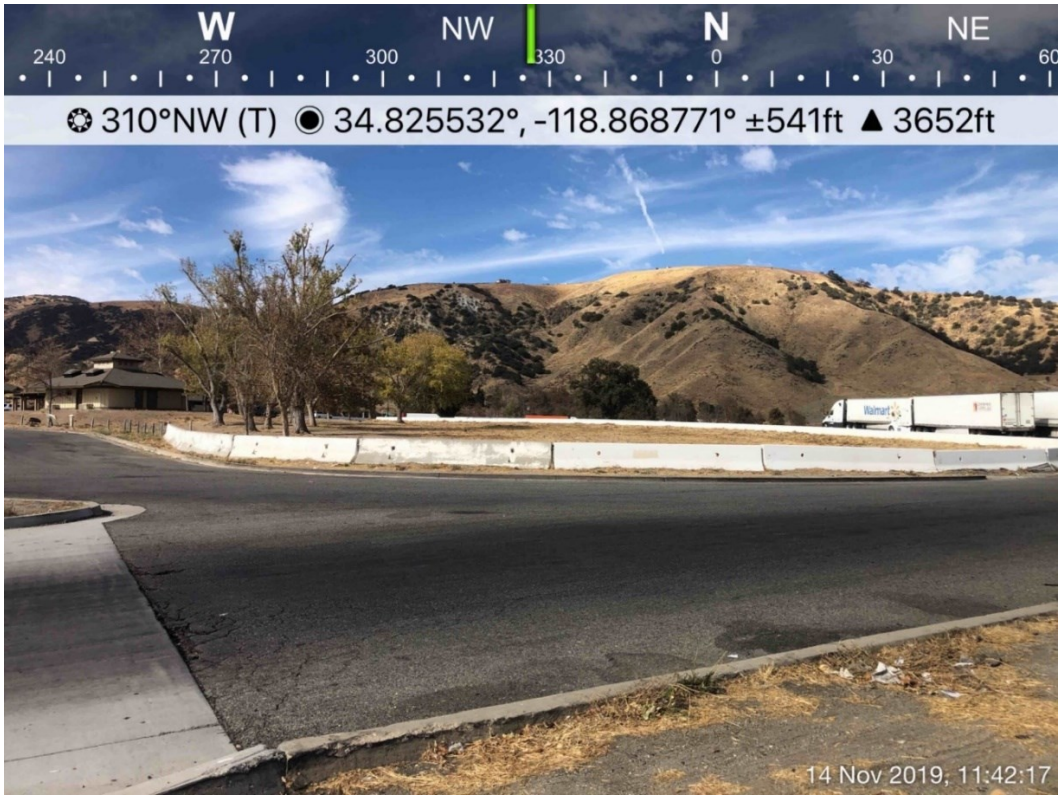
Photograph 5: Overview of the Lebec alignment within the fenced area adjacent to the rest stop facing east.



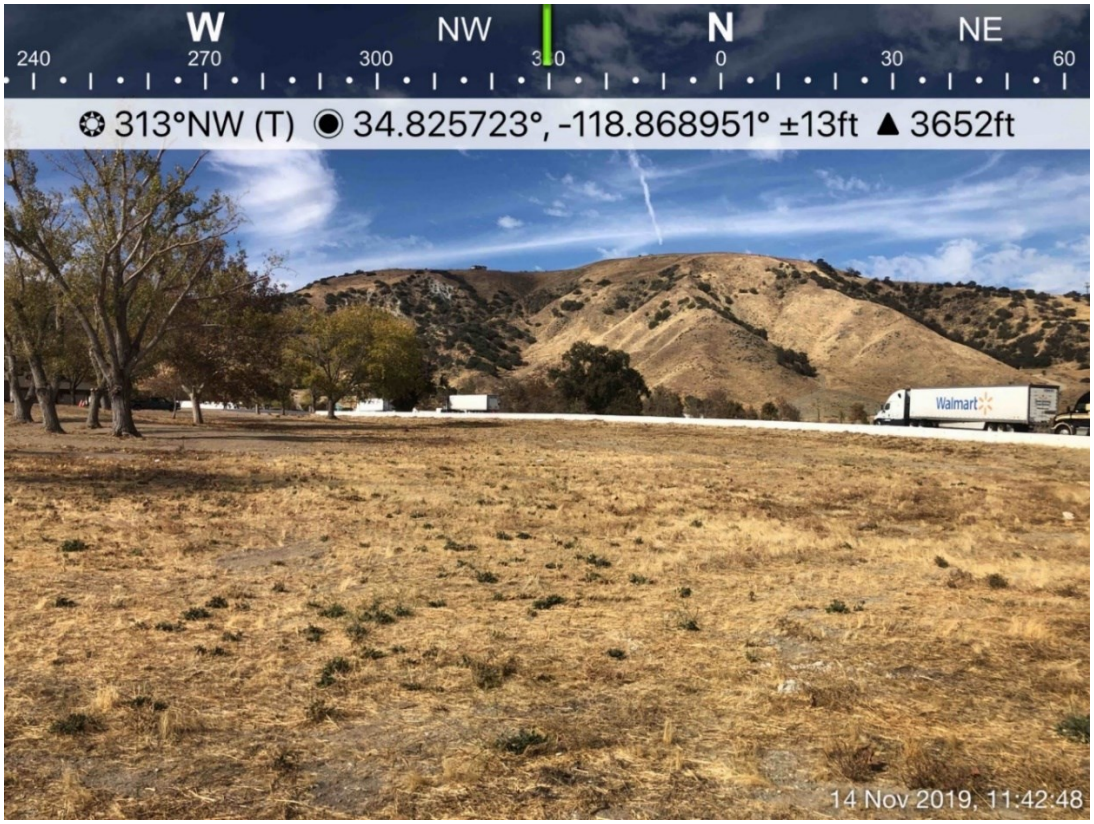
Photograph 6: Overview of the grassland within the fenced area along the Lebec well alignment facing the rest area.



Photograph 7: Overview of the Lebec alignment where it crosses from the fenced grassland area to the ruderal rest stop area.



Photograph 8: Overview of the ruderal habitat within the Lebec Northbound rest area along the Lebec well alignment. Debris and California sycamores (*Platanus racemose)* visible.



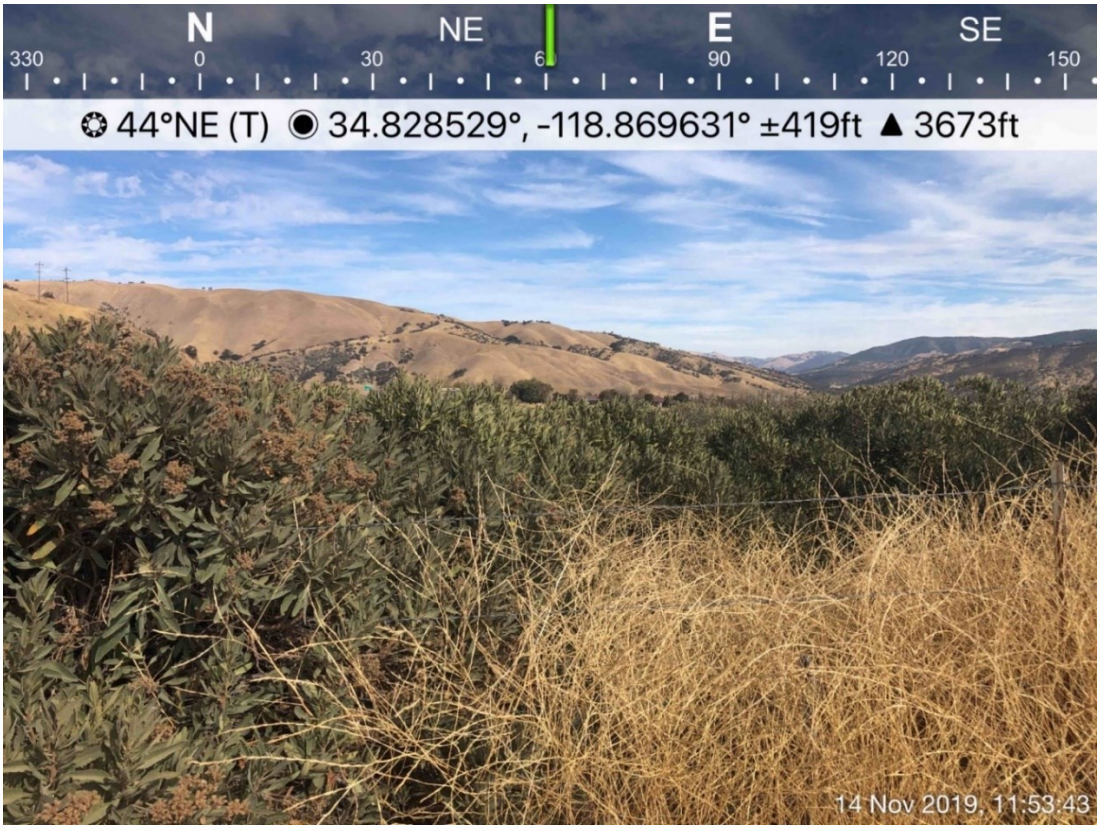
Photograph 9: Overview of the Lebec alignment. The Lebec Northbound rest area is visible to the left.



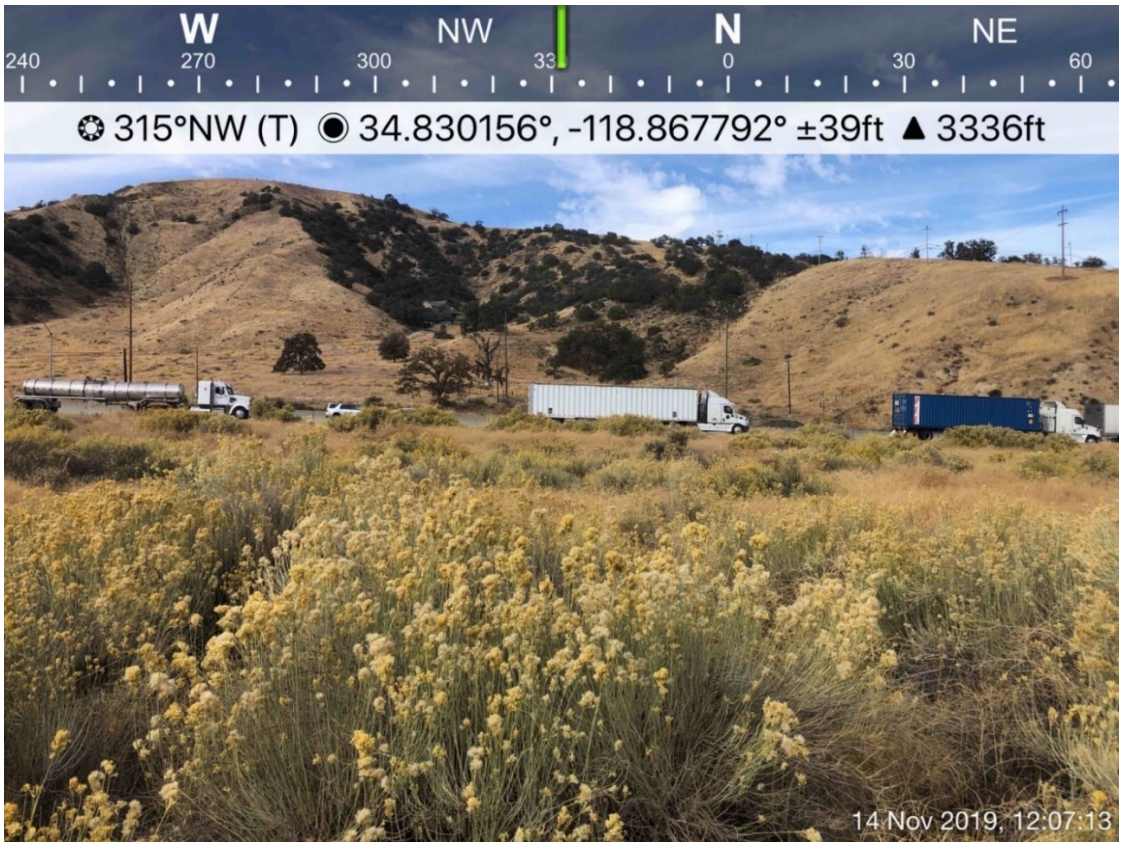
Photograph 10: Overview of the Lebec alignment. Valley oaks (*Quercus lobata*) are visible straight ahead and to the right.



Photograph 11: Overview of the Lebec alignment facing northeast. Northbound I-5 is visible to the left.



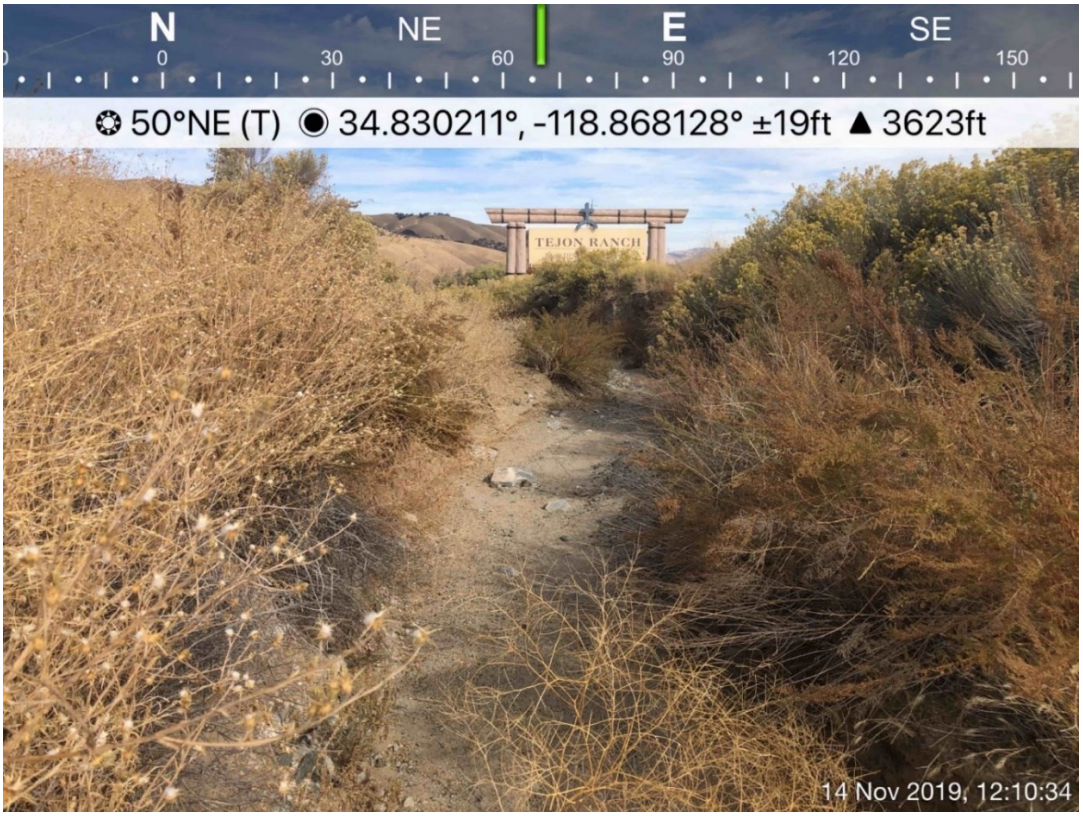
Photograph 12: Overview of sagebrush shrubland habitat along the Lebec well alignment parallel to and south of I-5.



Photograph 13: Overview of the Lebec alignment where it turns north and crosses I-5.



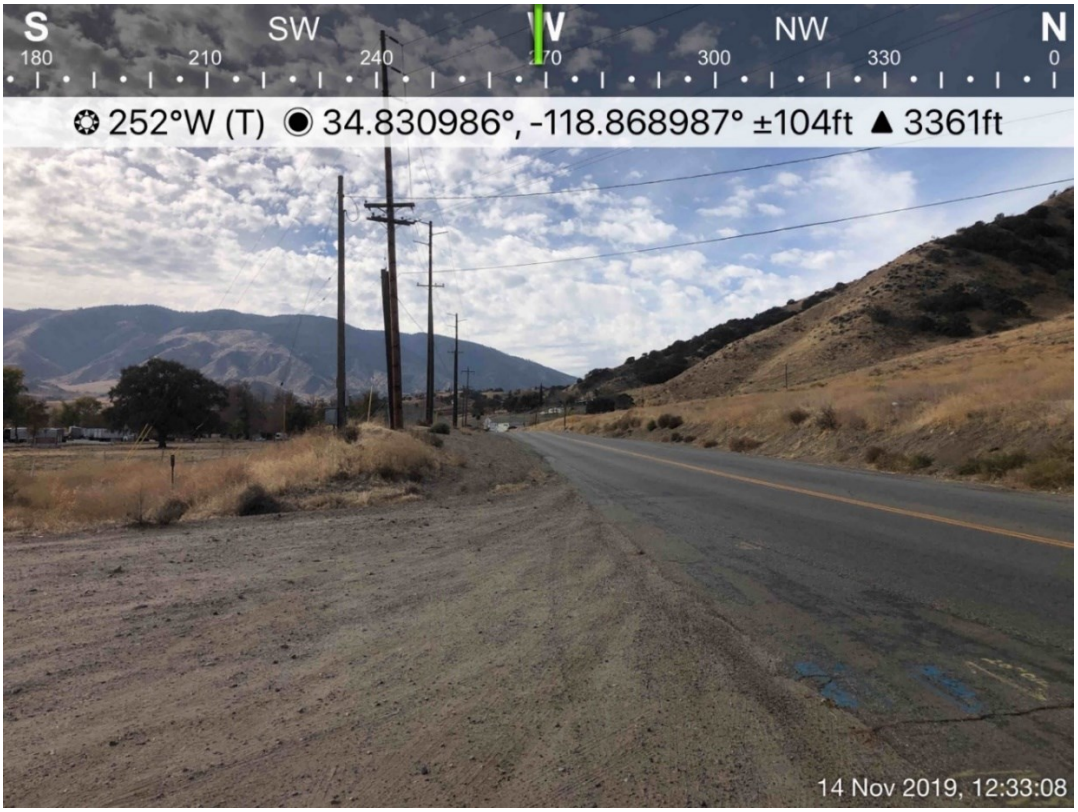
Photograph 14: Overview of an intermittent drainage within sagebrush shrubland adjacent to I-5. This photo illustrates the location where the proposed pipeline to Lebec Well site will cross the stream flows.



Photograph 15: Overview of an intermittent drainage within sagebrush shrubland adjacent to I-5. This photo illustrates the location where the proposed pipeline to Lebec Well site will cross the stream.



Photograph 16: Large valley oak (*Quercus lobata)* along the proposed pipeline to the Lebec Well site.



Photograph 17: Overview of the proposed Lebec/State Interconnection Pipeline on the northwest side of I-5 along the Lebec Road right of way.



Photograph 18: Overview of the proposed Lebec/State Interconnection Pipeline on the northwest side of I-5. I-5 is visible directly ahead.



Photograph 19: Overview of the proposed Lebec/State Interconnection Pipeline on the northwest side of I-5. Southbound I-5 is visible on the right. Lebec Road is visible on the left.



Photograph 20: Overview of the proposed Lebec/State Interconnection Pipeline along the Lebec Road right of way facing southwest. I-5 is visible to the left.



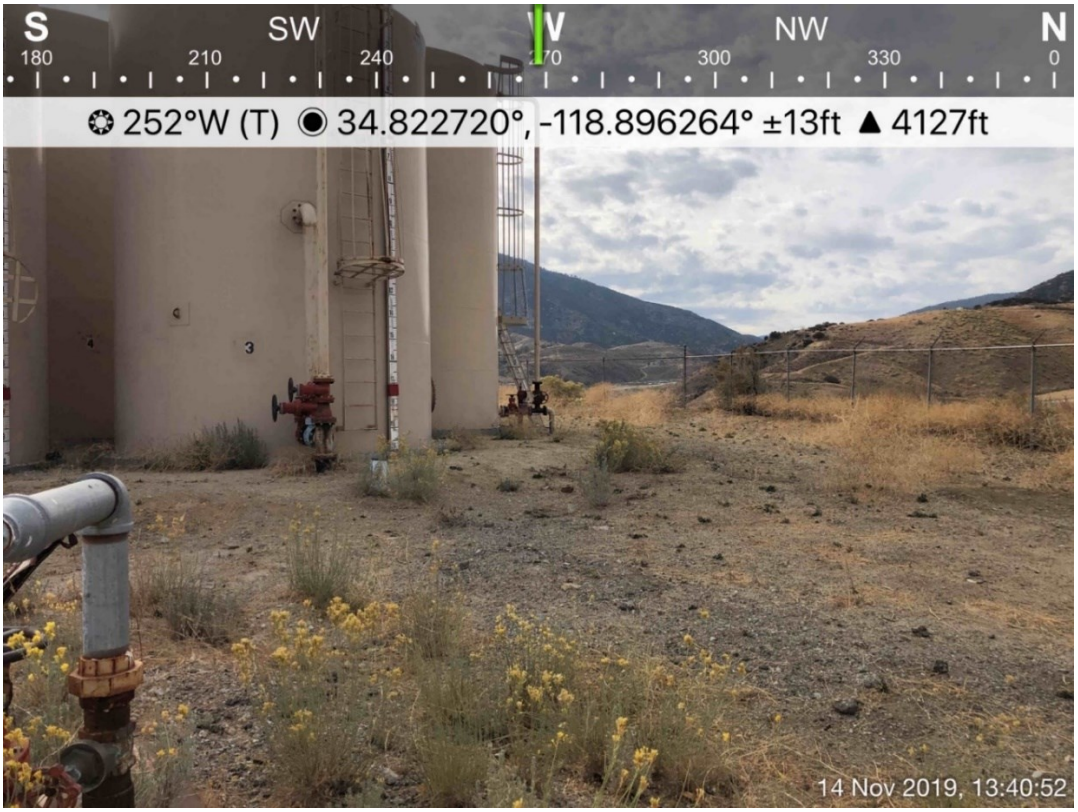
Photograph 21: Overview of the fence and gated entrance to the Chimney Canyon tank site.



Photograph 22: Overview of the Chimney Canyon tank site facing southeast. Industrial debris and weedy vegetation visible. Substrate is compacted dirt, gravel, and cement pads are present housing equipment.



Photograph 23: Overview of the Chimney Canyon tank site facing southeast.



Photograph 24: Overview of the Chimney Canyon tank site facing west.



Photograph 25: Overview of the FMHS alignment facing southwest. One of the many concrete-lined drainages present uphill of FMHS



Photograph 26: Overview of the FMHS alignment and the concrete-lined drainages uphill of FMHS. The fencing around the southern baseball diamond is visible in the background, and a valley oak tree is visible in the upper left margin of this photograph.



Photograph 27: Overview of a concrete-lined drainage along the FMHS alignment. Standing water, hydrophytic and riparian vegetation are present as well as refuse and debris.



Photograph 28: Overview of the concrete-lined drainage channel and FMHS alignment leading to the FMHS tank site. Standing water, sediment, and hydrophytic vegetation, such as cattails (*Typha sp.*) (visible in this photo)



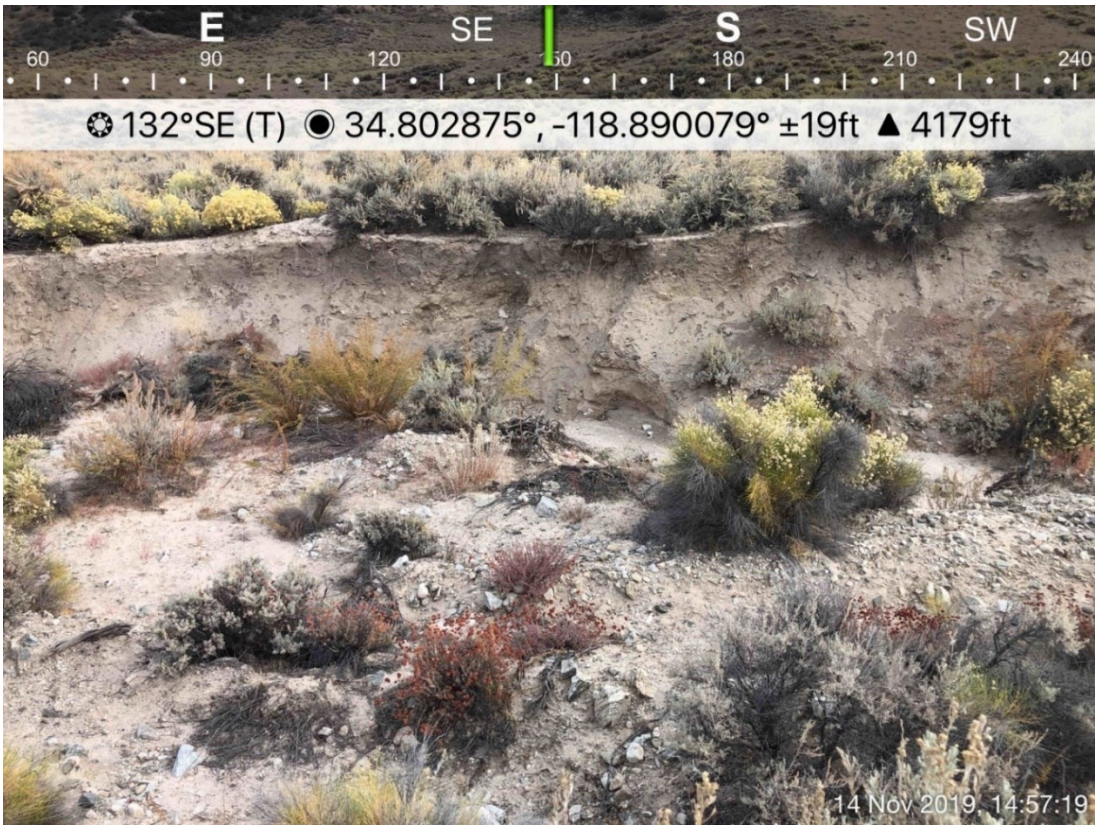
Photograph 29: Overview of the FMHS tank site facing south.



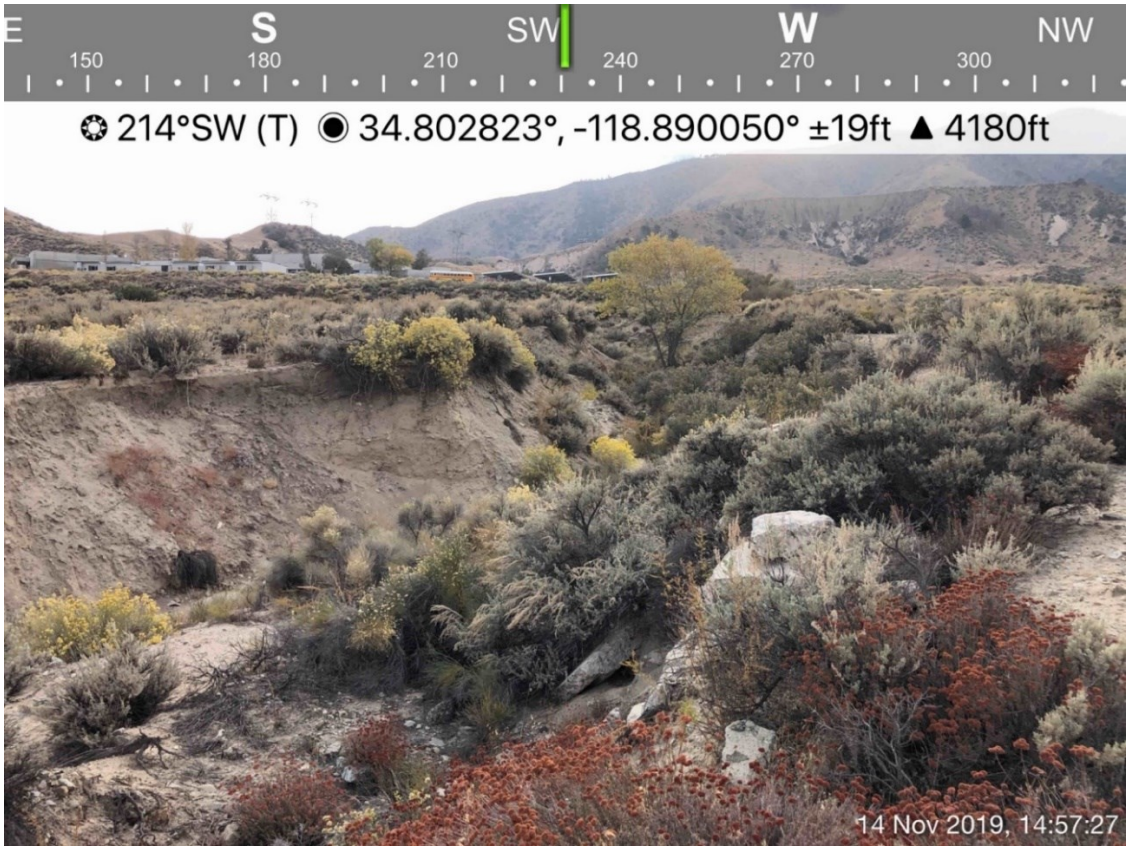
Photograph 30: Overview of the FMHS alignment from the FMHS tank site facing east. Baseball diamonds are visible on both sides of this paved service road.



Photograph 31: Overview of an intermittent stream north of FMHS, across the proposed pipeline alignment.



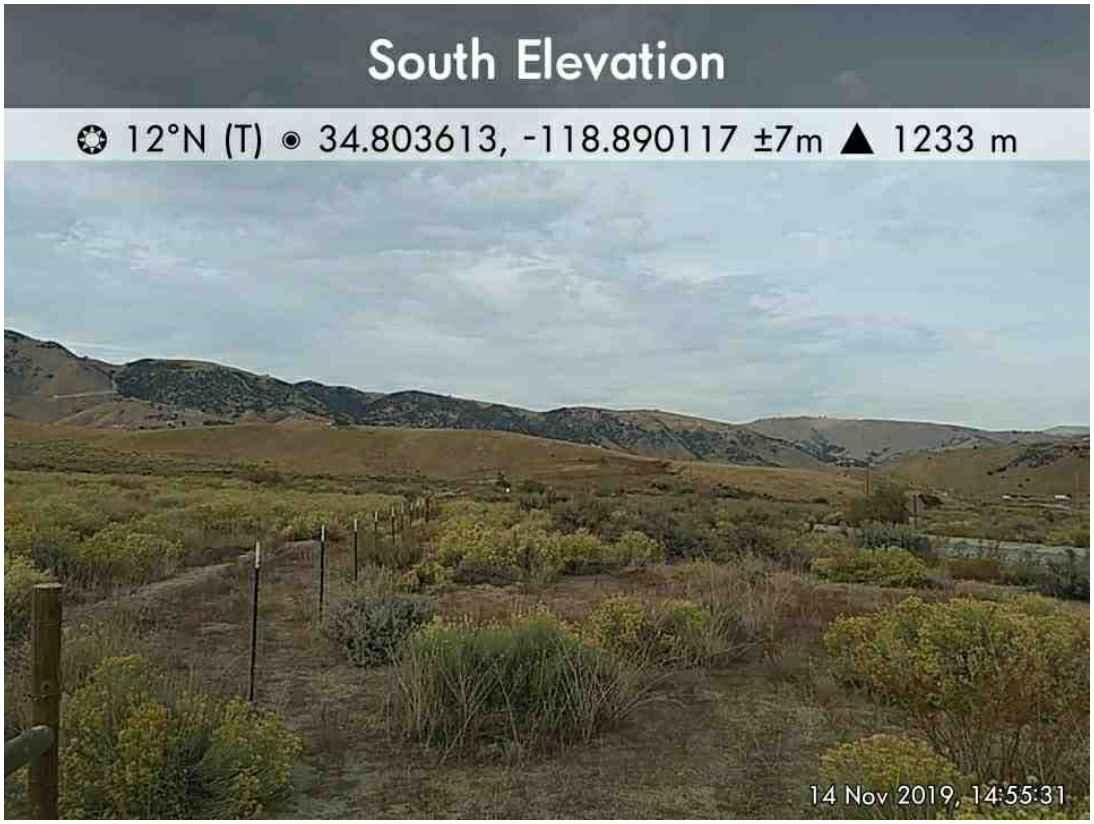
Photograph 32: Overview of the intermittent stream mentioned in photo 31 above. The channel has features associated with desert arroyo.



Photograph 33: Overview of the intermittent stream mentioned in photos 32 and 31 above. The eroded banks and incised channel are visible in this photograph. Riparian trees are present upstream.



Photograph 34: Overview of the FMHS alignment from the corner of Flacon Way facing south.



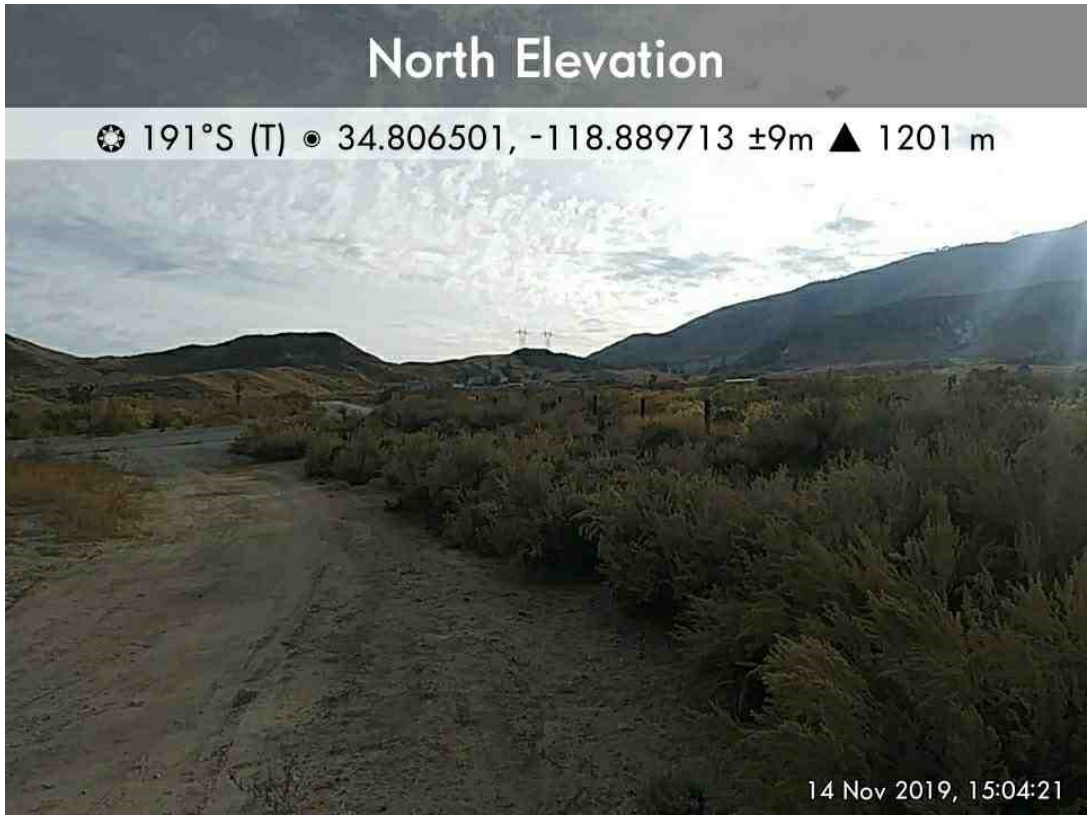
Photograph 35: Overview of the State Park fence parallel to Flacon way along the FMHS alignment facing south.



Photograph 36: Ephemeral drainage across the proposed pipeline alignment north of FMHS, along Falcon Way.



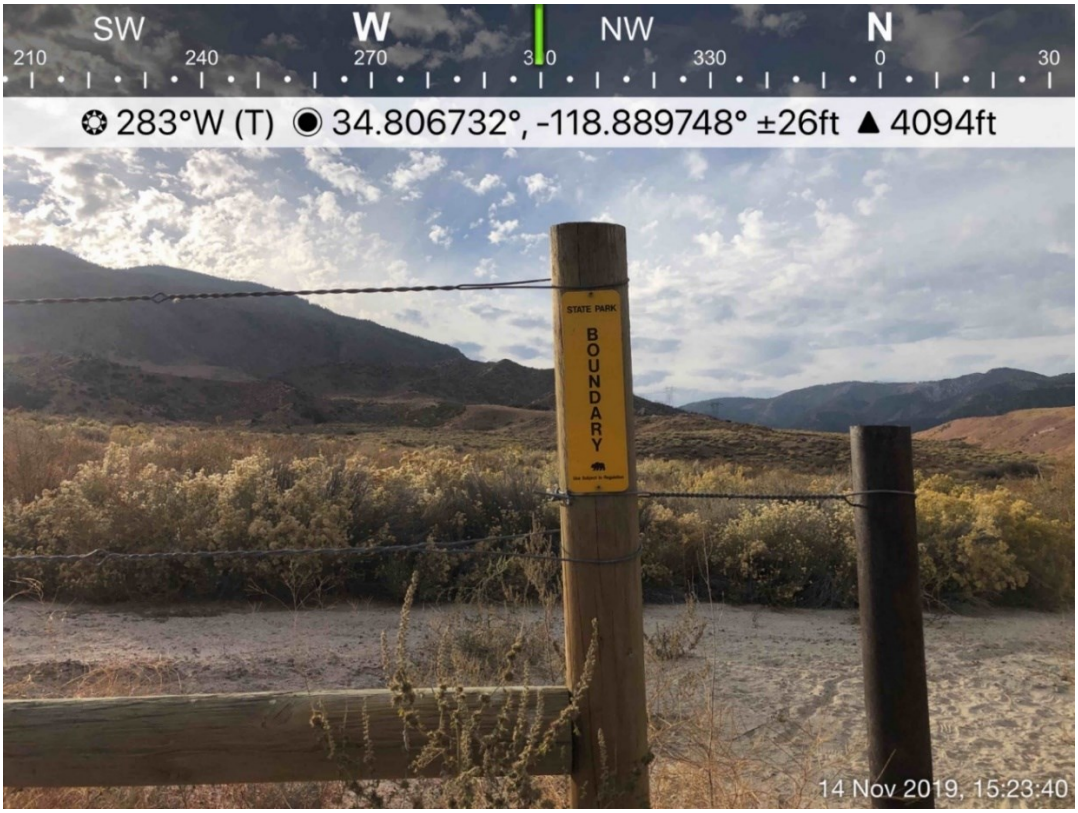
Photograph 37: Ephemeral drainage across the proposed pipeline alignment within State Park land.



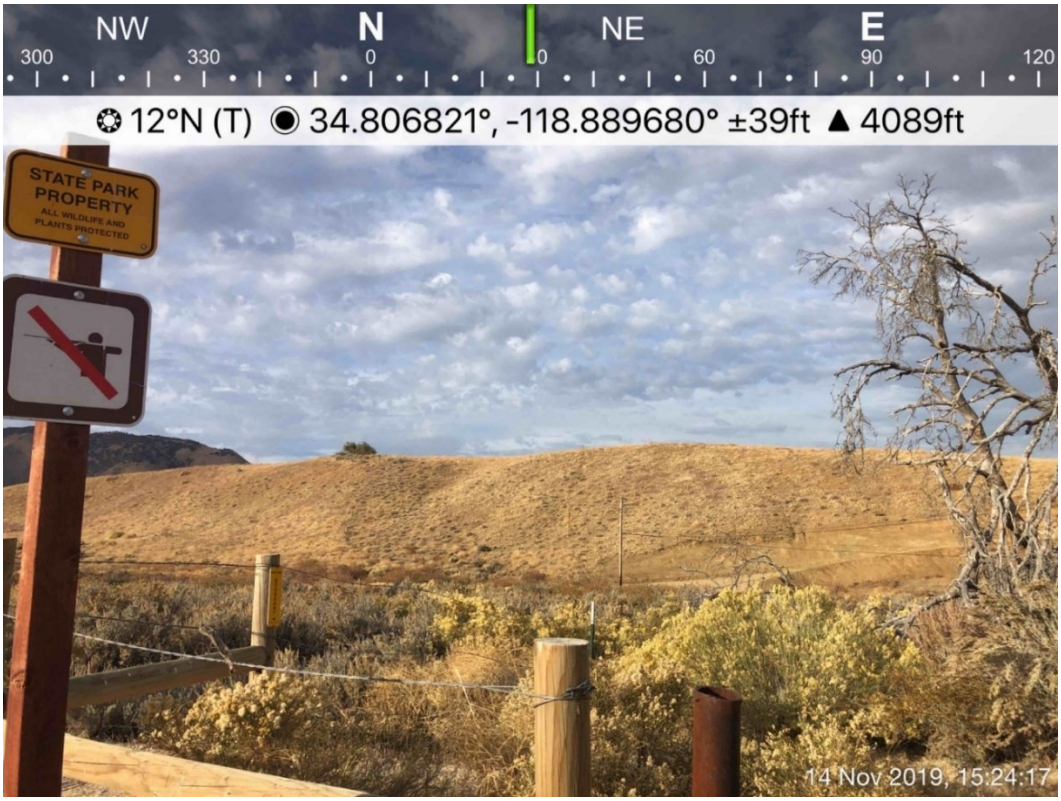
Photograph 38: Overview of the northmost accessible portion of the FMHS alignment facing south. Falcon Way is visible to the left.



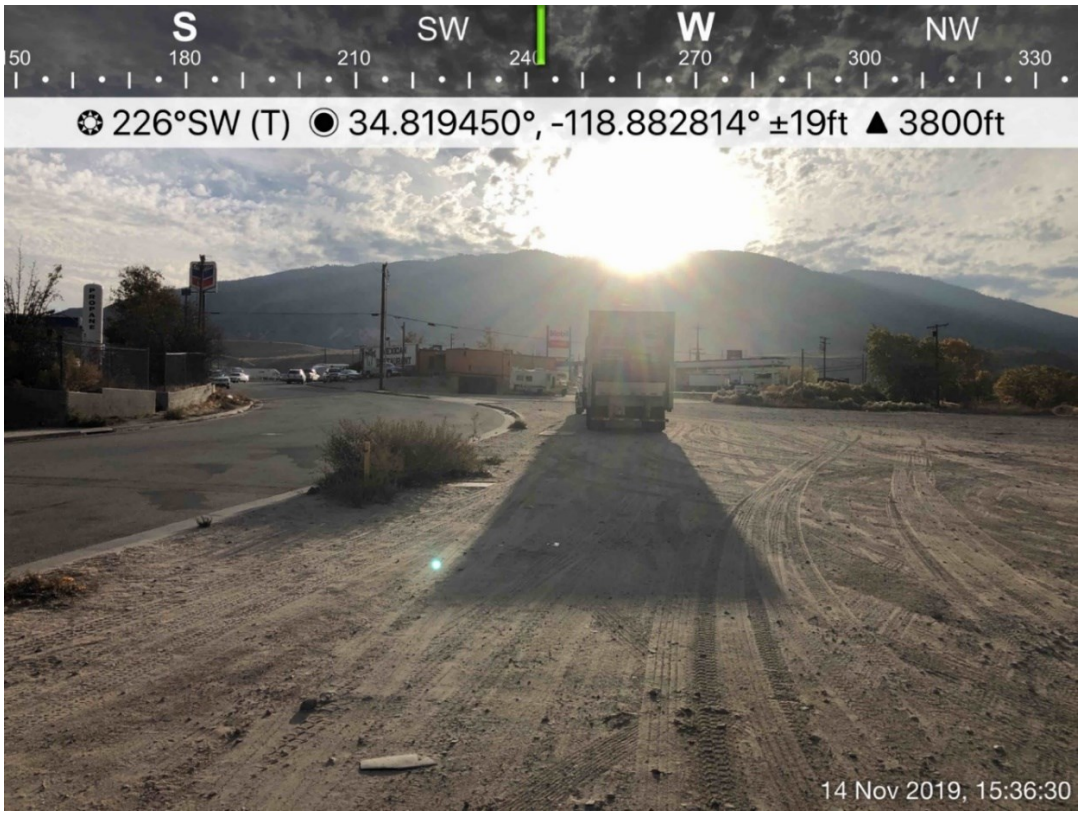
Photograph 39: Wildlife tracks, including kangaroo rat (*Dipodomys* sp.) tracks, which led underneath fencing along the FMHS alignment into State Park land.



Photograph 40: State Park signage on fencing preventing access to a portion of the FMHS alignment.



Photograph 41: Overview of a portion of the FMHS alignment segment. State park signage and fencing visible.



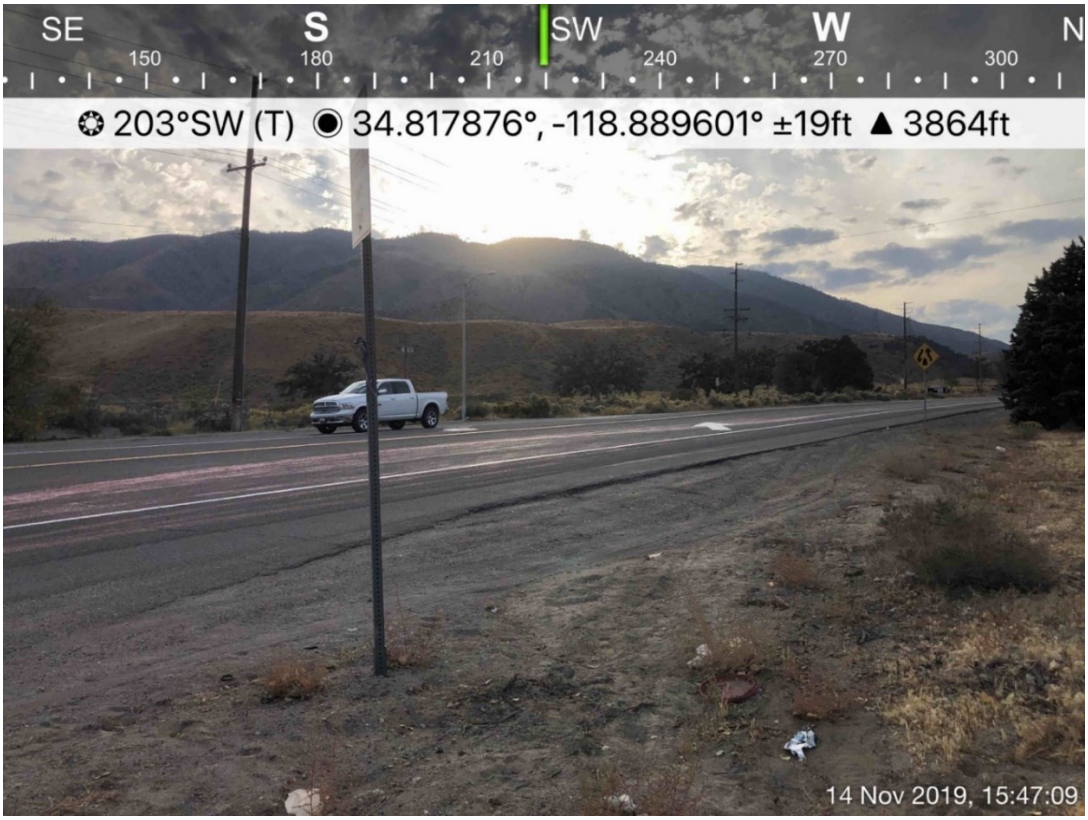
Photograph 42: Overview of the ruderal lot at the eastern terminus of the Frazier Mountain Road alignment.



Photograph 43: Overview of the right of way along the Frazier Mountain Road alignment parallel To Wainright Court facing west.



Photograph 44: Overview of the Frazier Mountain Road alignment in-between Wainright Court and Frazier Mountain Road facing east northeast.



Photograph 45: Overview of the Frazier Mountain Road alignment where it crosses Frazier Mountain Road.



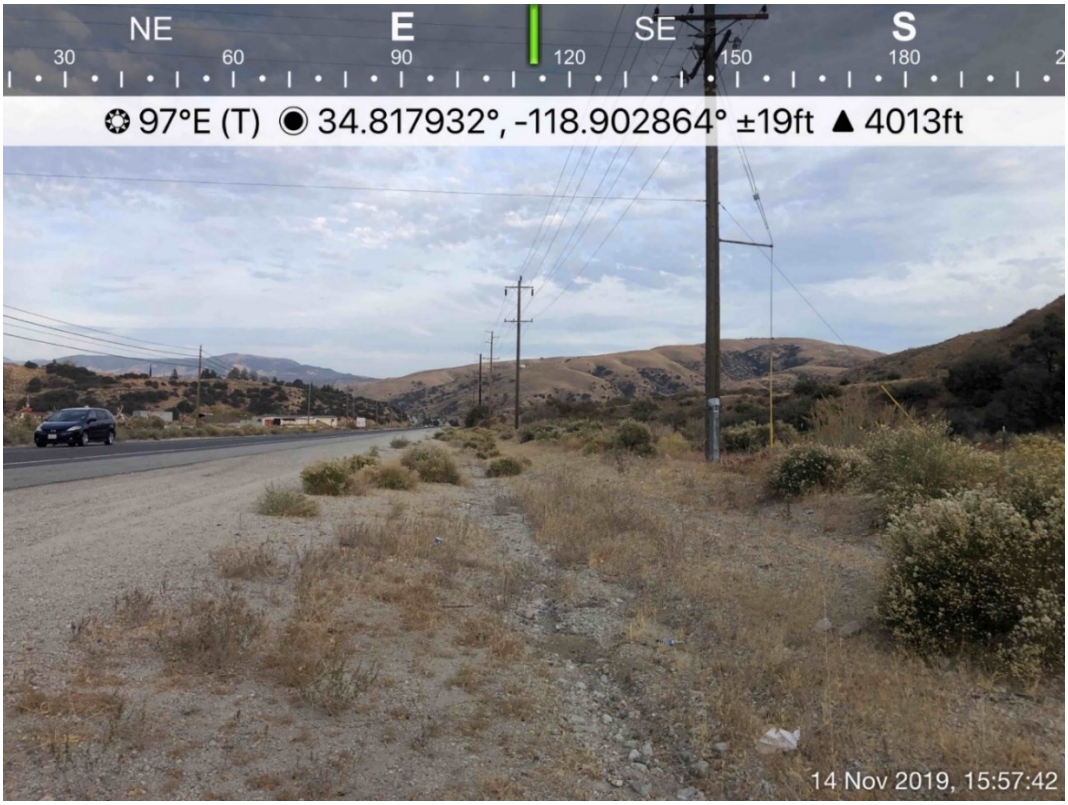
Photograph 46: Overview of the Frazier Mountain Road alignment along the Cuddy Canyon Road right of Way.



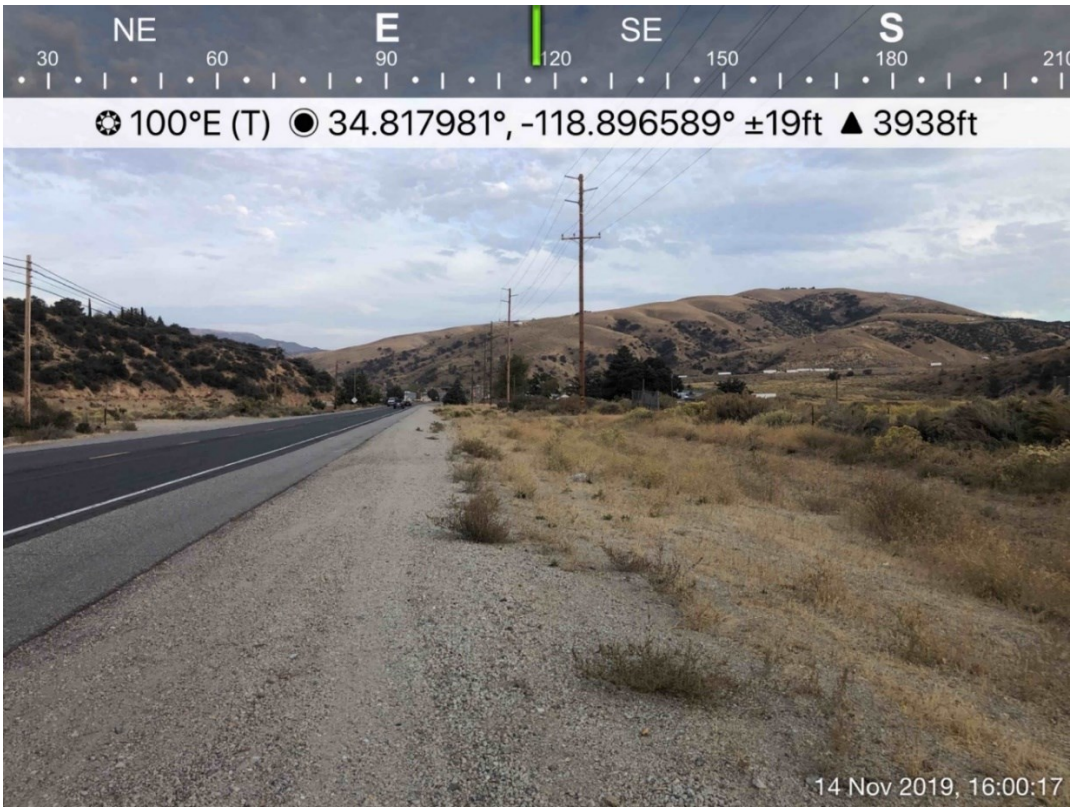
Photograph 47: Overview of the Frazier Mountain Road alignment along the Cuddy Canyon Road right of way facing Frazier Mountain Park Road.



Photograph 48: Overview of the Frazier Mountain Road alignment at the intersection of Frazier Mountain Road and Cuddy Canyon Road.



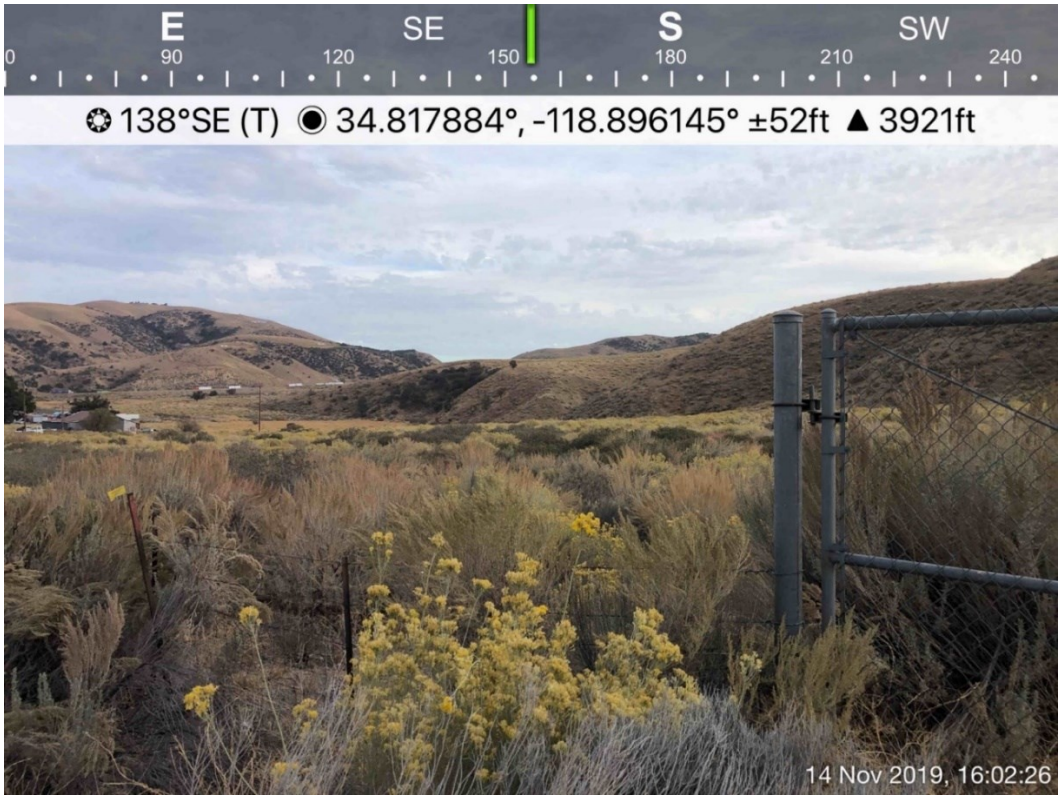
Photograph 40: Overview of the Frazier Mountain Road alignment along the Frazier Mountain Road right of way.



Photograph 50: Overview of the Frazier Mountain Road alignment along the Frazier Mountain Road right of way.



Photograph 51: Overview of the fencing around the site where the FMHS alignment and the Frazier Mountain Road alignment will connect.



Photograph 52: Overview of the FMHS alignment from the Frazier Mountain Road right of way.



Photograph 53: Overview of fencing preventing access to the FMHS alignment and the connection site.



Photograph 54: Overview of the Frazier mountain Road alignment along the Frazier Mountain Road right of way facing west. Roadside drainage ditches and culverts were observed.



Photograph 55: State park signage adjacent to the Frazier Mountain Road alignment.



Photograph 56: Overview of the Frazier Mountain Road alignment along the Frazier Mountain Road right of way. Private, fenced residence visible to the right.



Photograph 57: Overview of the Frazier Mountain Road alignment along the Frazier Mountain Road right of way facing east southeast.



Photograph 58: Overview of private residence directly adjacent to the Frazier Mountain Road alignment.



Photograph 59: Pipeline alignment through State Lands from FMHS to Frazier Mountain Road near ephemeral stream.



Photograph 60: Pipeline alignment through State Lands from FMHS to Frazier Mountain Road along ephemeral stream.



Photograph 61: Pipeline alignment through State Lands possible kangaroo rat tracks.



Photograph 62: Pipeline alignment through State Lands possible kangaroo rat tracks.



Photograph 63: Pipeline alignment through State Lands heading up the hillside moving north towards Frazier Mountain Road.



Photograph 64: Pipeline alignment through State Lands possible kangaroo rat tracks at bottom of the hill.



Photograph 65: Pipeline alignment through State Lands possible kangaroo rat burrows at bottom of the hill.



Photograph 66: Pipeline alignment through State Lands heading up the first hill, clear migration path



Photograph 67: Pipeline alignment through State Lands bottom of the first hill looking back at FMHS.



Photograph 68: Pipeline alignment through State Lands walking up the first hill, small animal migration path.



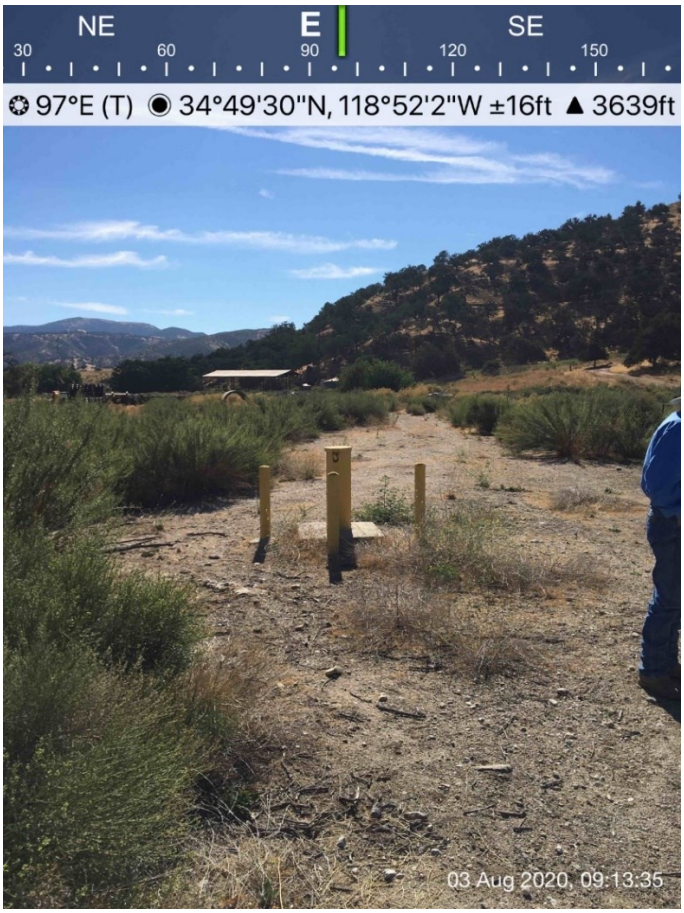
Photograph 69: Pipeline alignment through State Lands at the top of the first hill a group of large shrubs next to a water pipe sticking up out of the ground. Looks like it is leaking.



Photograph 70: Pipeline alignment through State Lands top Of hill looking towards I-5 and Frazier Mountain Road.



Photograph 71: Tejon Ranch looking towards the I-5 north bound rest area.



Photograph 72: Tejon Ranch existing test well site.



Photograph 72: Tejon Ranch staging area/parking lot.



Photograph 73: Tejon Ranch staging area/parking lot.



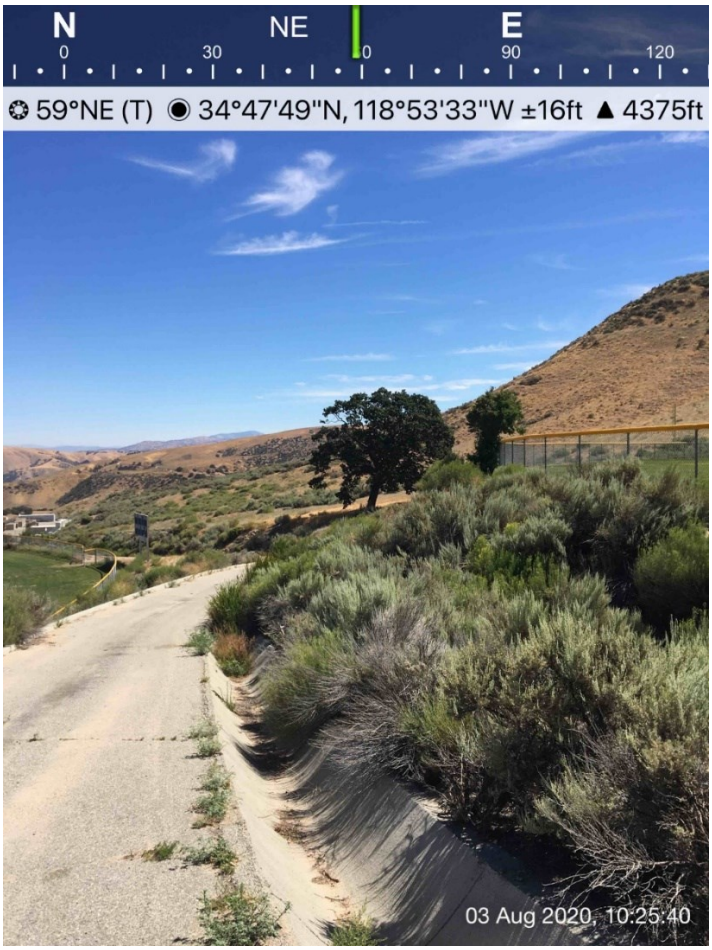
Photograph 74: Oak tree located to the right for the proposed pipeline to the well site.



Photograph 75: Tejon Ranch staging area/parking lot. Looking towards the oak tree and possible pipeline alignment.



Photograph 75: FMHS tank site.



Photograph 76: FMHS v-ditch from tank site along existing road toward school.



Photograph 77: Lebec Water District existing tank site.



Photograph 78: Lebec Water District existing tank site.



Photograph 79: Lebec Water District existing tank site looking down to the homes at the northeast side of the tanks.



Photograph 80: Cuddy Creek at the road crossing from Frazier Mountain Road to the existing tank site.

Appendix B. CNDDB Query Results

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Lebec (3411877) OR Frazier Mtn. (3411878))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S3	SSC
Baja navarretia *Navarretia peninsularis*	PDPLM0C0L0	None	None	G3	S2	1B.2
Big Bear Valley woollypod *Astragalus leucolobus*	PDFAB0F4T0	None	None	G2	S2	1B.2
blunt-nosed leopard lizard *Gambelia sila*	ARACF07010	Endangered	Endangered	G1	S1	FP
burrowing owl *Athene cunicularia*	ABNSB10010	None	None	G4	S3	SSC
calico monkeyflower *Diplacus pictus*	PDSCR1B240	None	None	G2	S2	1B.2
California glossy snake *Arizona elegans occidentalis*	ARADB01017	None	None	G5T2	S2	SSC
California horned lark *Eremophila alpestris actia*	ABPAT02011	None	None	G5T4Q	S4	WL
California legless lizard *Anniella spp.*	ARACC01070	None	None	G3G4	S3S4	SSC
coast horned lizard *Phrynosoma blainvillii*	ARACF12100	None	None	G3G4	S3S4	SSC
coastal California gnatcatcher *Polioptila californica californica*	ABPBJ08081	Threatened	None	G4G5T2Q	S2	SSC
coastal whiptail *Aspidoscelis tigris stejnegeri*	ARACJ02143	None	None	G5T5	S3	SSC
Conservancy fairy shrimp *Branchinecta conservatio*	ICBRA03010	Endangered	None	G2	S2	
Cooper's hawk *Accipiter cooperii*	ABNKC12040	None	None	G5	S4	WL
Crotch bumble bee *Bombus crotchii*	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
ferruginous hawk *Buteo regalis*	ABNKC19120	None	None	G4	S3S4	WL
Fort Tejon woolly sunflower *Eriophyllum lanatum var. hallii*	PDAST3N058	None	None	G5T1	S1	1B.1
fringed myotis *Myotis thysanodes*	AMACC01090	None	None	G4	S3	
golden eagle *Aquila chrysaetos*	ABNKC22010	None	None	G5	S3	FP
grasshopper sparrow *Ammodramus savannarum*	ABPBXA0020	None	None	G5	S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Horn's milk-vetch *Astragalus hornii var. hornii*	PDFAB0F421	None	None	GUT1	S1	1B.1
Kern River pyrg *Pyrgulopsis greggi*	IMGASJ0A10	None	None	G1	S1	
Lemmon's jewelflower *Caulanthus lemmonii*	PDBRA0M0E0	None	None	G3	S3	1B.2
loggerhead shrike *Lanius ludovicianus*	ABPBR01030	None	None	G4	S4	SSC
long-legged myotis *Myotis volans*	AMACC01110	None	None	G5	S3	
Mount Pinos sooty grouse *Dendragapus fuliginosus howardi*	ABNLC09022	None	None	G5T2T3	S2S3	SSC
Mt. Pinos onion *Allium howellii var. clokeyi*	PMLIL02161	None	None	G4T2	S2	1B.3
northern California legless lizard *Anniella pulchra*	ARACC01020	None	None	G3	S3	SSC
obscure bumble bee *Bombus caliginosus*	IIHYM24380	None	None	G4?	S1S2	
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G5	S3	SSC
Palmer's mariposa-lily *Calochortus palmeri var. palmeri*	PMLIL0D122	None	None	G3T2	S2	1B.2
Piute Mountains navarretia *Navarretia setiloba*	PDPLM0C0S0	None	None	G2	S2	1B.1
red-breasted sapsucker *Sphyrapicus ruber*	ABNYF05020	None	None	G5	S4	
Robbins' nemacladus *Nemacladus secundiflorus var. robbinsii*	PDCAM0F0B2	None	None	G3T2	S2	1B.2
San Bernardino aster *Symphyotrichum defoliatum*	PDASTE80C0	None	None	G2	S2	1B.2
San Emigdio blue butterfly *Plebulina emigdionis*	IILEPG7010	None	None	G1G2	S1S2	
short-joint beavertail *Opuntia basilaris var. brachyclada*	PDCAC0D053	None	None	G5T3	S3	1B.2
Southern Cottonwood Willow Riparian Forest *Southern Cottonwood Willow Riparian Forest*	CTT61330CA	None	None	G3	S3.2	
Tehachapi buckwheat *Eriogonum callistum*	PDPGN08790	None	None	G1	S1	1B.1
Tehachapi monardella *Monardella linoides ssp. oblonga*	PDLAM180D2	None	None	G5T2	S2	1B.3
Tehachapi pocket mouse *Perognathus alticola inexpectatus*	AMAFD01082	None	None	G1G2T1T2	S1S2	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Tehachapi slender salamander *Batrachoseps stebbinsi*	AAAAD02090	None	Threatened	G2	S2S3	
Tejon poppy *Eschscholzia lemmonii ssp. kernensis*	PDPAP0A071	None	None	G5T2	S2	1B.1
Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010	None	None	G3G4	S2	SSC
Tracy's eriastrum *Eriastrum tracyi*	PDPLM030C0	None	Rare	G3Q	S3	3.2
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
two-striped gartersnake *Thamnophis hammondii*	ARADB36160	None	None	G4	S3S4	SSC
Valley Needlegrass Grassland *Valley Needlegrass Grassland*	CTT42110CA	None	None	G3	S3.1	
Valley Oak Woodland *Valley Oak Woodland*	CTT71130CA	None	None	G3	S2.1	
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC
western small-footed myotis *Myotis ciliolabrum*	AMACC01140	None	None	G5	S3	
Wildflower Field *Wildflower Field*	CTT42300CA	None	None	G2	S2.2	
yellow warbler *Setophaga petechia*	ABPBX03010	None	None	G5	S3S4	SSC
yellow-blotched salamander *Ensatina eschscholtzii croceater*	AAAAD04011	None	None	G5T3	S3	WL
Yuma myotis *Myotis yumanensis*	AMACC01020	None	None	G5	S4	

Record Count: 55

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
San Joaquin coachwhip *Masticophis flagellum ruddocki*	ARADB21021	None	None	G5T2T3	S2?	SSC
San Joaquin kit fox *Vulpes macrotis mutica*	AMAJA03041	Endangered	Threatened	G4T2	S2	
San Joaquin Pocket Mouse *Perognathus inornatus*	AMAFD01060	None	None	G2G3	S2S3	
short-joint beavertail *Opuntia basilaris var. brachyclada*	PDCAC0D053	None	None	G5T3	S3	1B.2
slender mariposa-lily *Calochortus clavatus var. gracilis*	PMLIL0D096	None	None	G4T2T3	S2S3	1B.2
Southern Coast Live Oak Riparian Forest *Southern Coast Live Oak Riparian Forest*	CTT61310CA	None	None	G4	S4	
Southern Cottonwood Willow Riparian Forest *Southern Cottonwood Willow Riparian Forest*	CTT61330CA	None	None	G3	S3.2	
Southern Mixed Riparian Forest *Southern Mixed Riparian Forest*	CTT61340CA	None	None	G2	S2.1	
southern rubber boa *Charina umbratica*	ARADA01011	None	Threatened	G2G3	S2S3	
Southern Sycamore Alder Riparian Woodland *Southern Sycamore Alder Riparian Woodland*	CTT62400CA	None	None	G4	S4	
Southern Willow Scrub *Southern Willow Scrub*	CTT63320CA	None	None	G3	S2.1	
Tehachapi buckwheat *Eriogonum callistum*	PDPGN08790	None	None	G1	S1	1B.1
Tehachapi monardella *Monardella linoides ssp. oblonga*	PDLAM180D2	None	None	G5T2	S2	1B.3
Tehachapi pocket mouse *Perognathus alticola inexpectatus*	AMAFD01082	None	None	G1G2T1T2	S1S2	SSC
Tehachapi slender salamander *Batrachoseps stebbinsi*	AAAAD02090	None	Threatened	G2	S2S3	
Tejon poppy *Eschscholzia lemmonii ssp. kernensis*	PDPAP0A071	None	None	G5T2	S2	1B.1
Tipton kangaroo rat *Dipodomys nitratoides nitratoides*	AMAFD03152	Endangered	Endangered	G3T1T2	S1S2	
Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010	None	None	G3G4	S2	SSC
Tracy's eriastrum *Eriastrum tracyi*	PDPLM030C0	None	Rare	G3Q	S3	3.2
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
two-striped gartersnake *Thamnophis hammondii*	ARADB36160	None	None	G4	S3S4	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Valley Needlegrass Grassland *Valley Needlegrass Grassland*	CTT42110CA	None	None	G3	S3.1	
Valley Oak Woodland *Valley Oak Woodland*	CTT71130CA	None	None	G3	S2.1	
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC
western small-footed myotis *Myotis ciliolabrum*	AMACC01140	None	None	G5	S3	
western spadefoot *Spea hammondii*	AAABF02020	None	None	G3	S3	SSC
Wildflower Field *Wildflower Field*	CTT42300CA	None	None	G2	S2.2	
yellow warbler *Setophaga petechia*	ABPBX03010	None	None	G5	S3S4	SSC
yellow-blotched salamander *Ensatina eschscholtzii croceater*	AAAAD04011	None	None	G5T3	S3	WL
Yuma myotis *Myotis yumanensis*	AMACC01020	None	None	G5	S4	

Record Count: 91

Appendix C. USFWS Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: March 24, 2020
Consultation Code: 08ESMF00-2020-SLI-1409
Event Code: 08ESMF00-2020-E-04473
Project Name: Frazier Mountain High School/Lebec County Water District Water System Improvement Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
(805) 644-1766

Project Summary

Consultation Code: 08ESMF00-2020-SLI-1409

Event Code: 08ESMF00-2020-E-04473

Project Name: Frazier Mountain High School/Lebec County Water District Water System Improvement Project

Project Type: WATER QUALITY MODIFICATION

Project Description: The Project is generally located in southern Kern County both east and west of Interstate 5 (I-5) within the unincorporated community of Lebec, CA. The Project involves the construction and operation of water system improvements for the purpose of consolidating the FMHS water system with LCWD by annexing the territory of FMHS into the LCWD, as well as the water system improvement necessary to replace the FMHS water supply through extension of services to FMHS, and construction of associated infrastructure. The Project's water system improvements would increase water storage capacity within the District and create an interconnection with LCWD to replace drinking water at FMHS.

The term "Project Area" is used in the analyses to describe the Project's areas of disturbance and the parcels affected by the Project. Areas of disturbance as evaluated in this IS/MND consider each Project component site, plus a construction buffer that extends a minimum of 12.5 feet in either direction of pipeline alignments.

FMHS currently has a water system that serves a total of 300 students and staff. The water system consists of a well, transmission pipeline, 120,000-gallon storage tank, and distribution pipelines. The transmission pipeline is used to deliver water from the well to the steel storage tank. Water is diverted by gravity from the tank through a short pipe that branches off into two subsystems, namely a mainline that provides domestic water to the main school facilities by gravity, and a mainline that serves the landscaped irrigated areas (e.g., sports fields) with a booster pump. This water system delivers on average 19.3 million gallons per year of potable water and has an estimated landscaped area of approximately 6.6 acres. The potential school population to be served by the system in the future, if possible, is about 500 students and staff, to be consistent with the initial estimates when the school was built.

Currently FMHS obtains its water supply from a primary well (FMHS Well 01) that was drilled in 1992 and is located at 700 Falcon Way, Lebec, CA 93243. The well currently violates the Safe Drinking Water Maximum

Contaminant Level (MCL) for fluoride and uranium. Because the fluoride and uranium levels exceed the MCL at the school well site, the El Tejon Unified School District (School District) — owner of the FMHS water system — has received compliance orders from the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) for each of these violations.

Actions included in the Project consist of all activities necessary to implement a Sphere of Influence Amendment and Annexation by LAFCo to allow for the consolidation of the FMHS water system with LCWD's water system, and all approvals and permitting associated with the construction and operation of the water system improvements.

The total combined area of disturbance would encompass approximately 12 acres, which includes the buffers allowed for the construction of pipelines along proposed alignments.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/34.82985973141166N118.86797462951208W



Counties: Kern, CA | Los Angeles, CA

Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. 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.

Mammals

NAME	STATUS
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard *Gambelia silus*	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/625	
Green Sea Turtle *Chelonia mydas*	Threatened
Population: East Pacific DPS	
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/6199	

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii*	Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.	
Species profile: https://ecos.fws.gov/ecp/species/2891	
Species survey guidelines:	
https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf	

Crustaceans

NAME	STATUS
Riverside Fairy Shrimp *Streptocephalus woottoni*	Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.	
Species profile: https://ecos.fws.gov/ecp/species/8148	

Flowering Plants

NAME	STATUS
California Orcutt Grass *Orcuttia californica*	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/4923	

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
Phone: (805) 644-1766 Fax: (805) 644-3958

In Reply Refer To: March 24, 2020
Consultation Code: 08EVEN00-2020-SLI-0336
Event Code: 08EVEN00-2020-E-00681
Project Name: Frazier Mountain High School/Lebec County Water District Water System Improvement Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed list identifies species listed as threatened and endangered, species proposed for listing as threatened or endangered, designated and proposed critical habitat, and species that are candidates for listing that may occur within the boundary of the area you have indicated using the U.S. Fish and Wildlife Service's (Service) Information Planning and Conservation System (IPaC). The species list fulfills the requirements under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the species list should be verified after 90 days. We recommend that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists following the same process you used to receive the enclosed list. Please include the Consultation Tracking Number in the header of this letter with any correspondence about the species list.

Due to staff shortages and excessive workload, we are unable to provide an official list more specific to your area. Numerous other sources of information are available for you to narrow the list to the habitats and conditions of the site in which you are interested. For example, we recommend conducting a biological site assessment or surveys for plants and animals that could help refine the list.

If a Federal agency is involved in the project, that agency has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a major construction project*, the Federal agency has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If the Federal agency determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve

conflicts with respect to threatened or endangered species or their critical habitat prior to a written request for formal consultation. During this review process, the Federal agency may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the Federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812 for information on other sensitive species that may occur in this area.

[*A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.]

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
(805) 644-1766

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08EVEN00-2020-SLI-0336

Event Code: 08EVEN00-2020-E-00681

Project Name: Frazier Mountain High School/Lebec County Water District Water System Improvement Project

Project Type: WATER QUALITY MODIFICATION

Project Description: The Project is generally located in southern Kern County both east and west of Interstate 5 (I-5) within the unincorporated community of Lebec, CA. The Project involves the construction and operation of water system improvements for the purpose of consolidating the FMHS water system with LCWD by annexing the territory of FMHS into the LCWD, as well as the water system improvement necessary to replace the FMHS water supply through extension of services to FMHS, and construction of associated infrastructure. The Project's water system improvements would increase water storage capacity within the District and create an interconnection with LCWD to replace drinking water at FMHS.

The term "Project Area" is used in the analyses to describe the Project's areas of disturbance and the parcels affected by the Project. Areas of disturbance as evaluated in this IS/MND consider each Project component site, plus a construction buffer that extends a minimum of 12.5 feet in either direction of pipeline alignments.

FMHS currently has a water system that serves a total of 300 students and staff. The water system consists of a well, transmission pipeline, 120,000-gallon storage tank, and distribution pipelines. The transmission pipeline is used to deliver water from the well to the steel storage tank. Water is diverted by gravity from the tank through a short pipe that branches off into two subsystems, namely a mainline that provides domestic water to the main school facilities by gravity, and a mainline that serves the landscaped irrigated areas (e.g., sports fields) with a booster pump. This water system delivers on average 19.3 million gallons per year of potable water and has an estimated landscaped area of approximately 6.6 acres. The potential school population to be served by the system in the future, if possible, is about 500 students and staff, to be consistent with the initial estimates when the school was built.

Currently FMHS obtains its water supply from a primary well (FMHS Well 01) that was drilled in 1992 and is located at 700 Falcon Way, Lebec, CA 93243. The well currently violates the Safe Drinking Water Maximum

Contaminant Level (MCL) for fluoride and uranium. Because the fluoride and uranium levels exceed the MCL at the school well site, the El Tejon Unified School District (School District) — owner of the FMHS water system — has received compliance orders from the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) for each of these violations.
Actions included in the Project consist of all activities necessary to implement a Sphere of Influence Amendment and Annexation by LAFCo to allow for the consolidation of the FMHS water system with LCWD's water system, and all approvals and permitting associated with the construction and operation of the water system improvements.
The total combined area of disturbance would encompass approximately 12 acres, which includes the buffers allowed for the construction of pipelines along proposed alignments.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/34.82985973141166N118.86797462951208W



Counties: Kern, CA | Los Angeles, CA

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. 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.

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Crustaceans

NAME	STATUS
Riverside Fairy Shrimp *Streptocephalus woottoni* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8148	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
California Orcutt Grass *Orcuttia californica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4923	Endangered
Spreading Navarretia *Navarretia fossalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1334	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Appendix D. NOAA EFH Mapping Query Results

Secure | https://www.habitat.noaa.gov/application/efhmapper/index.html

NOAA HABITAT CONSERVATION | HABITAT PROTECTION
NATIONAL MARINE FISHERIES SERVICE

EFH View Tool | Data Query Tool

Activate Location Query

Print This Report

EFH Data Notice: Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional Fishery Management Councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

West Coast Regional Office
Alaska Regional Office

Query Results

Degrees, Minutes, Seconds: Latitude = 34º49'6" N, Longitude = 119º7'5" W
Decimal Degrees: Latitude = 34.82, Longitude = -118.88

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

HAPCs

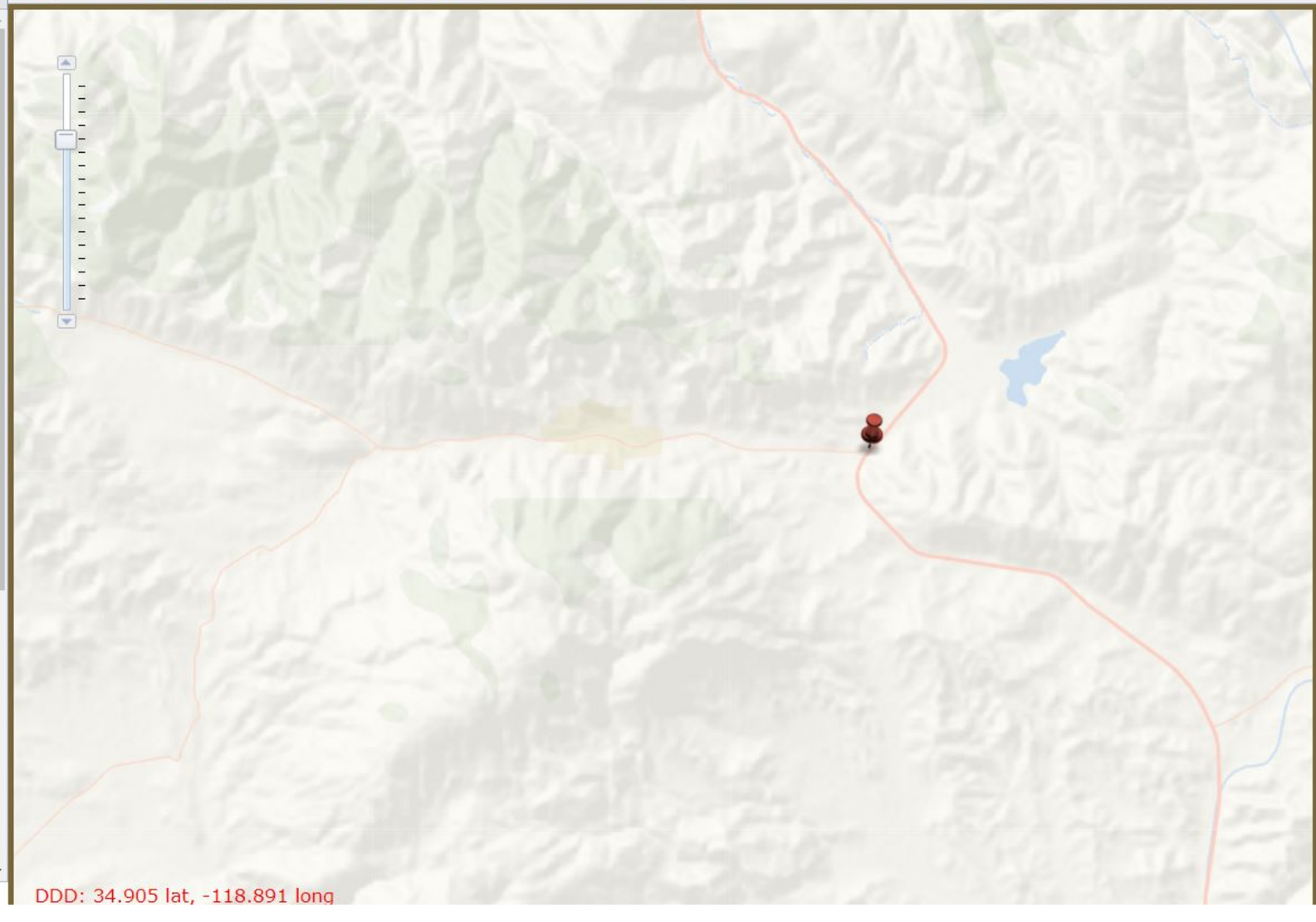
No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this

Zoom: | Extent: | Location Query: | 10 Min sq.: | Help:



EFH Data Notice: Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional Fishery Management Councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

West Coast Regional Office
Alaska Regional Office

Query Results

Degrees, Minutes, Seconds: Latitude = 34º49'3" N, Longitude = 119º6'54" W
Decimal Degrees: Latitude = 34.82, Longitude = -118.88

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

Pacific Coastal Pelagic Species,
Jack Mackerel,
Pacific (Chub) Mackerel,
Pacific Sardine,
Northern Anchovy - Central Subpopulation,
Northern Anchovy - Northern Subpopulation,
Pacific Highly Migratory Species,
Bigeye Thresher Shark - North Pacific,
Bluefin Tuna - Pacific,
Dolphinfish (Dorado or Mahimahi) - Pacific,
Pelagic Thresher Shark - North Pacific,
Swordfish - North Pacific,
West Coast Salmon,
All species and stocks

Appendix E. Soils Report

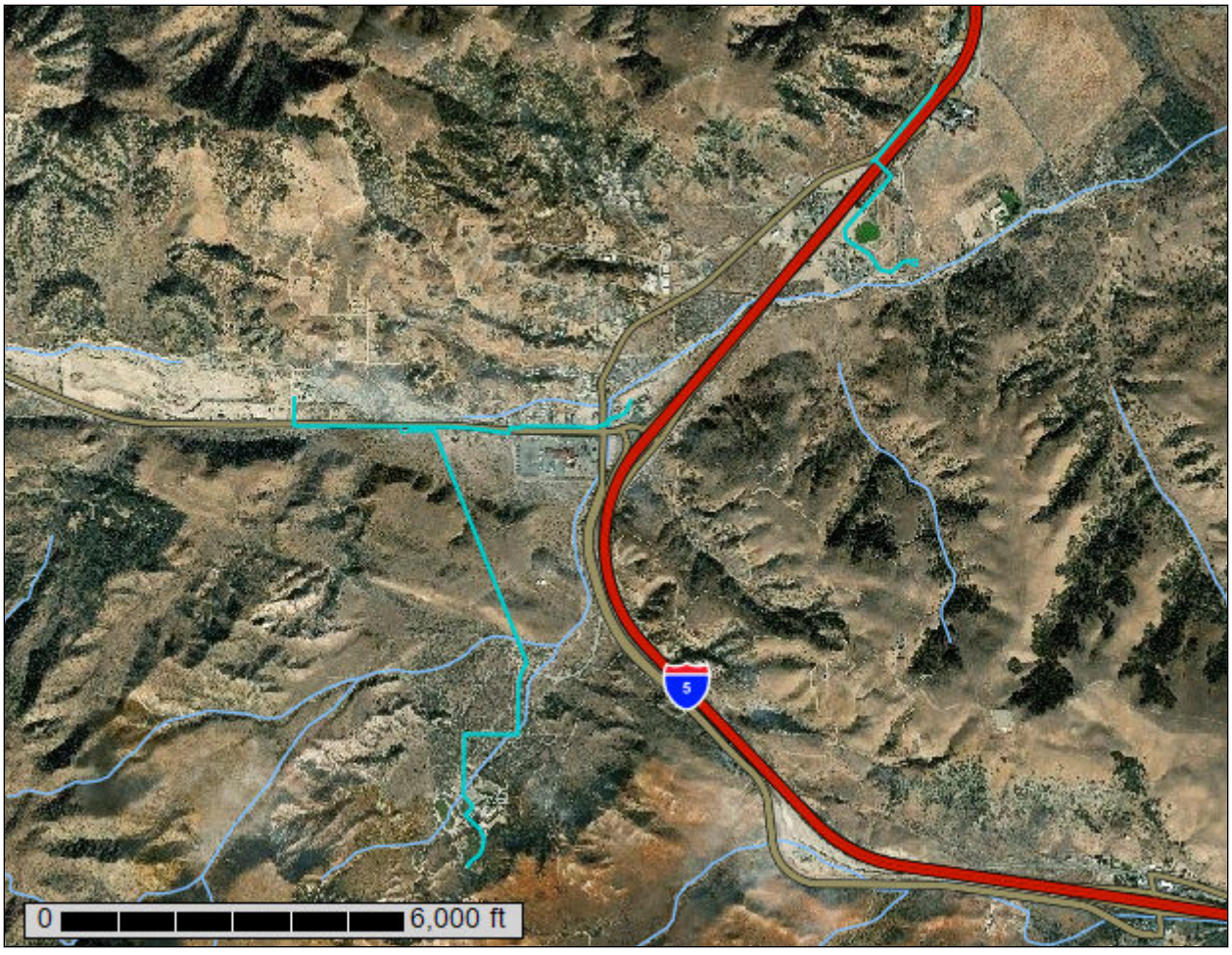
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Antelope Valley Area, California; and Kern County, California, Southwest Part



March 24, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface.....2
How Soil Surveys Are Made.....5
Soil Map.....8
Soil Map.....9
Legend.....10
Map Unit Legend.....12
Map Unit Descriptions.....12
Antelope Valley Area, California.....15
GoD—Gorman sandy loam, 9 to 15 percent slopes.....15
GoE2—Gorman sandy loam, 15 to 30 percent slopes, eroded.....16
GoF2—Gorman sandy loam, 30 to 50 percent slopes, eroded.....17
GsC—Greenfield sandy loam, 2 to 9 percent slopes.....18
HbC—Hanford coarse sandy loam, 2 to 9 percent slopes.....20
HcC—Hanford sandy loam, 2 to 9 percent slopes.....21
HdC—Hanford gravelly sandy loam, 2 to 9 percent slopes.....22
Kern County, California, Southwest Part.....24
850—Xerofluvents, 0 to 5 percent slopes.....24
860—Hawk gravelly sandy loam, 9 to 15 percent slopes.....25
980—Area not surveyed, access denied.....26
References.....28

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

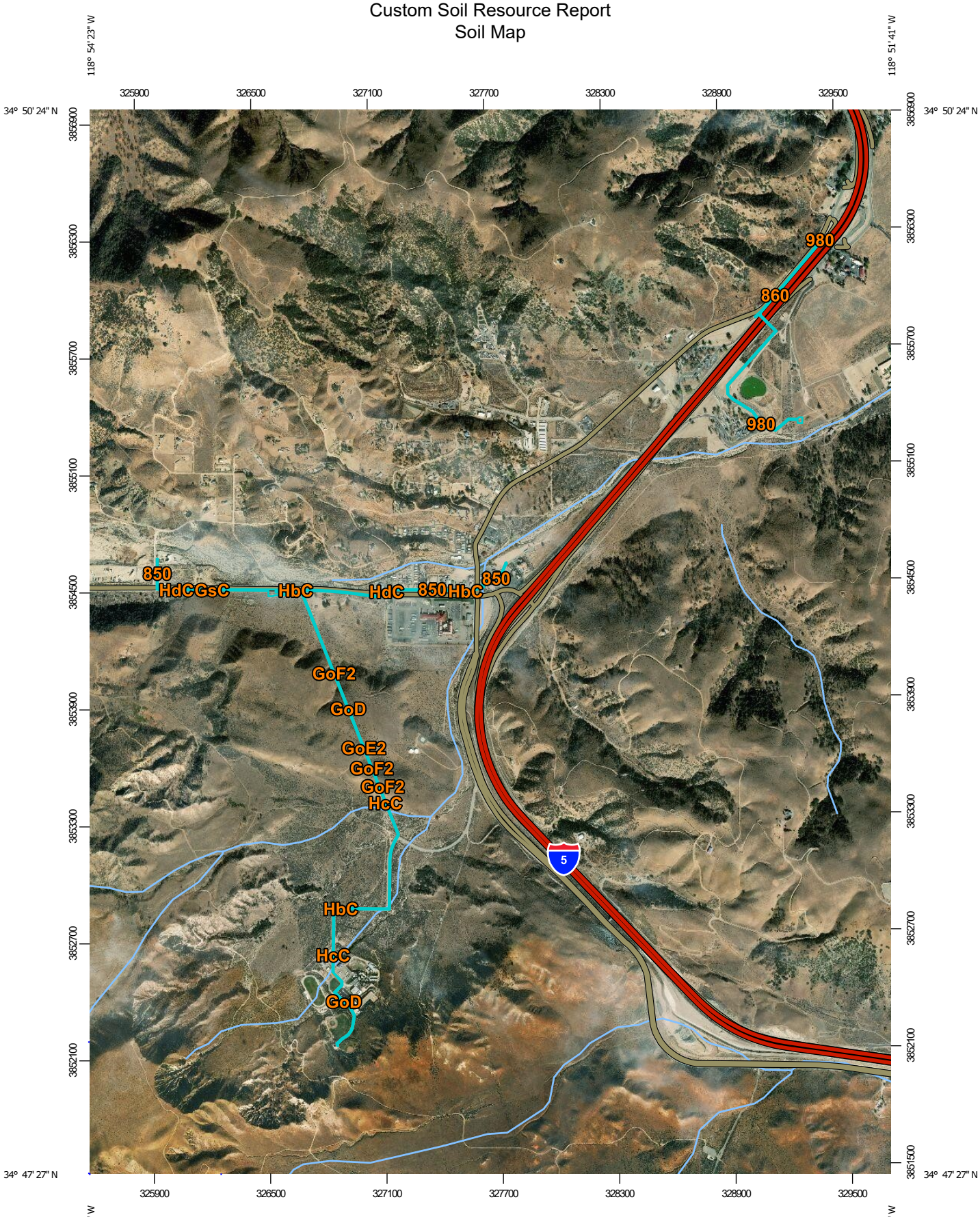
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


118° 54' 23" W
118° 51' 41" W
34° 50' 24" N
34° 47' 27" N
325900
326500
327100
327700
328300
328900
329500
3856900
3856300
3855700
3855100
3854500
3853900
3853300
3852700
3852100
3851500
980
860
980
850
HdC
GsC
HbC
HdC
850
HbC
850
GoF2
GoD
GoE2
GoF2
GoF2
HcC
5
HbC
HcC
GoD
N
Map Scale: 1:26,600 if printed on A portrait (8.5" x 11") sheet.
Meters
0
350
700
1400
2100
Feet
0
1000
2000
4000
6000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Antelope Valley Area, California
Survey Area Data: Version 12, Sep 17, 2019

Soil Survey Area: Kern County, California, Southwest Part
Survey Area Data: Version 10, Sep 16, 2019

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Nov 2, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GoD	Gorman sandy loam, 9 to 15 percent slopes	1.3	9.8%
GoE2	Gorman sandy loam, 15 to 30 percent slopes, eroded	0.4	3.4%
GoF2	Gorman sandy loam, 30 to 50 percent slopes, eroded	0.8	6.6%
GsC	Greenfield sandy loam, 2 to 9 percent slopes	0.3	2.0%
HbC	Hanford coarse sandy loam, 2 to 9 percent slopes	2.9	22.9%
HcC	Hanford sandy loam, 2 to 9 percent slopes	1.8	13.8%
HdC	Hanford gravelly sandy loam, 2 to 9 percent slopes	1.1	8.5%
Subtotals for Soil Survey Area		**8.6**	**67.0%**
Totals for Area of Interest		**12.8**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
850	Xerofluvents, 0 to 5 percent slopes	1.1	9.0%
860	Hawk gravelly sandy loam, 9 to 15 percent slopes	1.0	7.6%
980	Area not surveyed, access denied	2.1	16.5%
Subtotals for Soil Survey Area		**4.2**	**33.0%**
Totals for Area of Interest		**12.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made

up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Antelope Valley Area, California

GoD—Gorman sandy loam, 9 to 15 percent slopes

Map Unit Setting

National map unit symbol: hcdq
Elevation: 4,000 to 4,500 feet
Mean annual precipitation: 15 inches
Mean annual air temperature: 55 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Gorman and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gorman

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 43 inches: sandy loam
H2 - 43 to 84 inches: sandy clay loam

Properties and qualities

Slope: 9 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: LOAMY 9-20" (R020XE024CA)
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 10 percent
Hydric soil rating: No

Oak glen
Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed
Percent of map unit: 1 percent
Landform: Drainageways
Hydric soil rating: Yes

GoE2—Gorman sandy loam, 15 to 30 percent slopes, eroded

Map Unit Setting
National map unit symbol: hcds
Elevation: 4,000 to 4,500 feet
Mean annual precipitation: 15 inches
Mean annual air temperature: 55 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Gorman and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gorman

Setting
Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from granite

Typical profile
H1 - 0 to 43 inches: sandy loam
H2 - 43 to 60 inches: sandy clay loam

Properties and qualities
Slope: 15 to 30 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: LOAMY 9-20" (R020XE024CA)
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 10 percent
Hydric soil rating: No

Oak glen

Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 1 percent
Landform: Drainageways
Hydric soil rating: Yes

GoF2—Gorman sandy loam, 30 to 50 percent slopes, eroded

Map Unit Setting

National map unit symbol: hcdt
Elevation: 4,000 to 4,500 feet
Mean annual precipitation: 15 inches
Mean annual air temperature: 55 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Gorman and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gorman

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 25 inches: sandy loam
H2 - 25 to 60 inches: sandy clay loam

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: LOAMY 9-20" (R020XE024CA)
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 10 percent
Hydric soil rating: No

Oak glen

Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 1 percent
Landform: Drainageways
Hydric soil rating: Yes

GsC—Greenfield sandy loam, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: hcdw
Elevation: 2,600 to 4,200 feet
Mean annual precipitation: 9 to 12 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 200 to 250 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Greenfield and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Greenfield

Setting

Landform: Alluvial fans, terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 20 inches: sandy loam
H2 - 20 to 60 inches: sandy loam
H3 - 60 to 80 inches: stratified loamy sand to coarse sandy loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: LOAMY 9-20" (R019XD064CA)
Hydric soil rating: No

Minor Components

Hanford

Percent of map unit: 8 percent
Hydric soil rating: No

Ramona

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 1 percent
Hydric soil rating: No

HbC—Hanford coarse sandy loam, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: hcf2
Elevation: 2,600 to 4,200 feet
Mean annual precipitation: 9 to 12 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 200 to 250 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Hanford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hanford

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 8 inches: coarse sandy loam
H2 - 8 to 39 inches: sandy loam, coarse sandy loam
H2 - 8 to 39 inches: gravelly loamy coarse sand, gravelly coarse sandy loam
H3 - 39 to 70 inches:
H3 - 39 to 70 inches:

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very high (about 13.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A

Ecological site: LOAMY 9-20" (R019XD064CA)
Hydric soil rating: No

Minor Components

Greenfield
Percent of map unit: 8 percent
Hydric soil rating: No

Ramona
Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed
Percent of map unit: 2 percent
Hydric soil rating: No

HcC—Hanford sandy loam, 2 to 9 percent slopes

Map Unit Setting
National map unit symbol: hcf5
Elevation: 2,600 to 4,200 feet
Mean annual precipitation: 9 to 12 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 200 to 250 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition
Hanford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hanford

Setting
Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile
H1 - 0 to 8 inches: sandy loam
H2 - 8 to 70 inches: fine sandy loam, sandy loam
H2 - 8 to 70 inches:

Properties and qualities
Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very high (about 14.5 inches)

Interpretive groups
Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: LOAMY 9-20" (R019XD064CA)
Hydric soil rating: No

Minor Components

Greenfield
Percent of map unit: 10 percent
Hydric soil rating: No

Unnamed
Percent of map unit: 5 percent
Hydric soil rating: No

HdC—Hanford gravelly sandy loam, 2 to 9 percent slopes

Map Unit Setting
National map unit symbol: hcf6
Elevation: 150 to 900 feet
Mean annual precipitation: 9 to 12 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 200 to 250 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition
Hanford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hanford

Setting
Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 8 inches: gravelly sandy loam
H2 - 8 to 70 inches: gravelly fine sandy loam, gravelly sandy loam, gravelly coarse sandy loam
H2 - 8 to 70 inches:
H2 - 8 to 70 inches:

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very high (about 16.4 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: LOAMY 9-20" (R019XD064CA)
Hydric soil rating: No

Minor Components

Greenfield

Percent of map unit: 10 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 5 percent
Hydric soil rating: No

Kern County, California, Southwest Part

850—Xerofluvents, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: hnj5
Elevation: 3,660 to 4,060 feet
Mean annual precipitation: 15 to 17 inches
Mean annual air temperature: 54 to 58 degrees F
Frost-free period: 200 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Xerofluvents and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Xerofluvents

Setting

Landform: Flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granitoid rock

Typical profile

A - 0 to 4 inches: gravelly sandy loam
C1 - 4 to 19 inches: extremely gravelly loamy sand
C2 - 19 to 31 inches: gravelly sand
C3 - 31 to 40 inches: extremely gravelly loamy sand
C4 - 40 to 53 inches: gravelly sand
C5 - 53 to 62 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum in profile: 2 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.3 to 3.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Hydric soil rating: Yes

Minor Components

Xerorthents, sandy
Percent of map unit: 10 percent
Landform: Flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Riverwash
Percent of map unit: 5 percent
Landform: Channels, flood plains
Hydric soil rating: No

860—Hawk gravelly sandy loam, 9 to 15 percent slopes

Map Unit Setting
National map unit symbol: hnj4
Elevation: 3,190 to 4,580 feet
Mean annual precipitation: 13 to 17 inches
Mean annual air temperature: 57 to 60 degrees F
Frost-free period: 200 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition
Hawk and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hawk

Setting
Landform: Alluvial fans
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Mountainflank, talf
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium derived from granite

Typical profile
Oi - 0 to 2 inches: gravelly slightly decomposed plant material
A1 - 2 to 7 inches: gravelly sandy loam
A2 - 7 to 17 inches: very gravelly sandy loam
A3 - 17 to 39 inches: very gravelly sandy loam
C - 39 to 60 inches: very gravelly sandy loam

Properties and qualities
Slope: 9 to 15 percent
Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 2.0
Available water storage in profile: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Frazier

Percent of map unit: 4 percent
Landform: Mountain slopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Mountainflank
Hydric soil rating: No

Unnamed, wet

Percent of map unit: 2 percent
Landform: Flood plains, drainageways
Landform position (three-dimensional): Talf
Hydric soil rating: Yes

Chuchupate

Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Hydric soil rating: No

Gorman

Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Mountainflank
Hydric soil rating: No

980—Area not surveyed, access denied

Map Unit Setting

National map unit symbol: 2lcrc
Elevation: 1,680 to 4,810 feet

Map Unit Composition

Access denied: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Access Denied

Properties and qualities

Depth to restrictive feature: More than 80 inches

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Appendix C:

Cultural Resources Report

CLASS III INVENTORY/PHASE I SURVEY, LEBEC COUNTY WATER DISTRICT AND FRAZIER MOUNTAIN HIGH SCHOOL WATER PROJECT, KERN COUNTY, CALIFORNIA

Prepared for:

Louise Palmer
Provost & Pritchard Consulting Group
1800 30th Street, #280
Bakersfield, CA 93301

Prepared by:

David S. Whitley, Ph.D., RPA
Principal Investigator

and

Robert Azpitarte, B.A.
Associate Archaeologist

ASM Affiliates
20424 West Valley Blvd., Suite A
Tehachapi, California 93561

November 2019

PN 333300.00

Page is intentionally blank

TABLE OF CONTENTS

Chapter **Page**

MANAGEMENT SUMMARY ..... **iii**

1. INTRODUCTION AND REGULATORY CONTEXT **1**
1.1 PROJECT LOCATION 1
1.2 PROJECT DESCRIPTION AND APE 2
1.3 REGULATORY CONTEXT 3
1.3.1 NHPA 3
1.3.2 National Register Criteria for Evaluation 3
1.3.3 CEQA 4

2. ENVIRONMENTAL AND CULTUAL BACKGROUND **7**
2.1 ENVIRONMENTAL BACKGROUND AND GEOARCHAELOGICAL CONTEXT 7
2.2 ETHNOGRAPHIC CONTEXT 7
2.2.1 Significant Themes 10
2.2.2 Associated Property Types 10
2.3 PREHISTORIC BACKGROUND 11
2.3.1 Significant Themes 13
2.3.2 Associated Property Types 14
2.4 HISTORIC BACKGROUND 144
2.4.1 Significant Themes 14
2.4.2 Associated Property Types 18

3. ARCHIVAL RECORDS SEARCH **21**

4. METHODS AND RESULTS **27**
4.1 INVENTORY RESULTS 27

5. SUMMARY, NRHP ELIGIBILITY EVALUATION AND RECOMMENDATIONS **33**
5.1 RECOMMENDATIONS 33

REFERENCES **35**

CONFIDENTIAL APPENDIX A **37**

LIST OF FIGURES

Page

Figure 1. Location of the Lebec Project study areas, Kern County, California 6
Figure 2. Proposed T-shaped pipe corridor from FMHS to Frazier Mountain Park Rd., looking southeast towards FMHS. 28
Figure 3. Proposed T-shaped pipe corridor along Frazier Mountain Park Rd., looking east towards Frazier Park travel center 29
Figure 4. Proposed pipe corridor along Interstate 5 towards new tank location, looking southwest 29
Figure 5. Overview of existing tank location near FMHS, looking north..... 30
Figure 6. Overview of existing tank location within Frazier Park community, looking southwest 30
Figure 7. Overview of proposed new tank location near northbound Lebec rest area, looking southwest..... 31

LIST OF TABLES

Page

Table 1. Survey Reports within the Study Area..... 21
Table 2. Survey Reports within 0.5-mi of the Study Area..... 22
Table 3 Resources within 0.5-mi of the Study Area 24

MANAGEMENT SUMMARY

An intensive Class III inventory/Phase I cultural resources survey was conducted for the Lebec County Water District and Frazier Mountain High School Water Project (Project), Lebec, Kern County, California. This study was conducted by ASM Affiliates, Inc., with David S. Whitley, Ph.D., RPA, serving as principal investigator. Background studies and fieldwork for the survey were completed in September – November 2019. The study was undertaken to provide compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 USC 470; 36 CFR Part 800), and the California Environmental Quality Act (CEQA).

The Project involves the construction and operation of water system improvements for the purpose of consolidating the Frazier Mountain High School (FMHS) water system with Lebec County Water District (LCWD). The area of potential effect (APE) for the project was defined as all ground-surface disturbance along with staging, lay-down and work areas. This includes two proposed pipe corridors that are 100-ft wide and which total approximately 4-miles in length, and three water tank locations – two existing and one to be constructed – on undeveloped and developed land. The horizontal APE is approximately 94-acres (ac) in total size. The vertical APE, defined as the maximum depth of excavation, was 10-ft.

A records search of site files and maps was conducted on 16 September 2019, at the Southern San Joaquin Valley Archaeological Information Center (IC), California State University, Bakersfield. A search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was also completed on 16 September 2019. The IC investigations determined that the study area had not been previously surveyed in its entirety and that no cultural resources were known or had been recorded within it. Based on the NAHC records, no sacred sites or traditional cultural places had been identified within or adjacent to the study area. Outreach letters were sent and follow-up calls to tribal organizations on the NAHC contact list were made. A call from the Big Pine Tribe of Owens Valley was received and, upon receiving additional Project information, they expressed no concern over the Project.

The Class III inventory/Phase I survey fieldwork was conducted in November 2019. Parallel transects spaced at 15-meter intervals were walked along the approximately 4-mi total pipeline routes, covering a 100-ft wide corridor, as well as across the three water tank APEs.

No cultural resources of any kind were identified within the proposed Area of Potential Effect. Based on these findings, the proposed Project does not have the potential to result in adverse impacts to significant historical resources or properties, and no additional cultural resource studies are recommended.

Page is intentionally blank

1. INTRODUCTION AND REGULATORY CONTEXT

ASM Affiliates was retained by Provost and Pritchard Consulting to conduct an intensive Class III Inventory/Phase I cultural resources survey for the Lebec County Water District and Frazier Mountain High School Water Project (Project), in and near the community of Lebec, Kern County, California. The purpose of this investigation was to assist with compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (54 USC § 300101 et seq.; 36 CFR Part 800), and the California Environmental Quality Act (CEQA). The investigation was undertaken, specifically, to ensure that no significant adverse effects or impacts to historical resources or historic properties occur as a result of the construction of this project.

This current study included:

- A background records search and literature review to determine if any known archaeological sites were present in the project zone and/or whether the area had been previously and systematically studied by archaeologists;
- A search of the NAHC *Sacred Lands File* to determine if any traditional cultural places or cultural landscapes have been identified within the area with outreach letters sent and follow-up calls made to the NAHC tribal contact list;
- An on-foot, intensive inventory of the Project APE to identify and record previously undiscovered cultural resources and to examine known sites; and
- A preliminary assessment of any such resources found within the subject property.

This study was conducted by ASM Affiliates, Inc., of Tehachapi, California, in September – November 2019. David S. Whitley, Ph.D., RPA, served as principal investigator. ASM Associate Archaeologist/Crew Chief Robert Azpitarte, B.A. conducted the fieldwork.

This manuscript constitutes a report on the Class III Inventory/Phase I survey. Subsequent chapters provide background to the investigation, including historic context studies; the findings of the archival records search; a summary of the field surveying techniques employed; and the results of the fieldwork. We conclude with management recommendations for the project area.

1.1 PROJECT LOCATION

The Lebec County Water District (LCWD) proposes improvements to Frazier Mountain High School Water system located on both sides of Interstate 5 (I-5) within the unincorporated community of Lebec, California, in Sections 3, 4, 9, 10, 26, 33, 34, and 35; Township 8 North, Range 19 West and Township 9 North, Range 19 West, Mount Diablo Base and Meridian (Figure 1). The APE, involving two pipe corridors and three tank locations, is located within the census-designated community Lebec and within portions of Frazier Mountain High School. The proposed tank APE's include three tank locations, two of which exist and will be upgraded and one which be built on undeveloped land.

The study area is located near the intersection of Kern, Los Angeles and Ventura counties, California (Figure 1). This places it about 70-miles north of downtown Los Angeles, within the

San Emigdio Mountains. These form a component of the Transverse Ranges which run roughly southeast – northwest across southern California. The San Andreas Rift Zone is near the western boundary of the study area, with Los Padres National Forest (LPNF) on the west, and the Interstate-5 freeway (I-5) forming the eastern boundaries of the study area. The study area encompasses portions of the Castac (not *Castaic*) Valley. In general, elevation ranges from a low of about 3,600- to 4,600-feet (ft) above mean sea level (amsl).

1.2 PROJECT DESCRIPTION AND APE

The Lebec County Water District (LCWD) proposes improvements to Frazier Mountain High School Water (FMHS) system located on both sides of Interstate 5 (I-5) within the unincorporated community of Lebec, California and portions of Frazier Mountain High School. The Project involves the construction and operation of water system improvements for the purpose of consolidating the FMHS water system with LCWD and will include:

1. Parallel to the western side of Interstate 5 (I-5): construction of approximately 0.33 linear miles of pressure zone interconnection pipeline. Approximately 1.0 acres of disturbance.
2. Crossing I-5: installation of new bored and jacked casing with 10-inch carrier pipeline, approximately 0.08 linear miles. Within existing rights-of-way resulting in no land disturbance.
3. Chimney Canyon Tank: installation of new 250,000-gallon water storage tank. The Chimney Canyon Tank site has six (6) existing tanks. The new tank will bring the total number to seven (7); Approximately 0.07 acres of disturbance.
4. Lebec Well Site: add approximately 0.54 linear miles of 8-inch diameter pipeline and drill a new well at a depth of approximately 300 feet below ground surface (bgs). The new well will replace FMHS Well 01. Approximately 1.9 acres of disturbance.
5. Frazier Mountain Road pipeline between Lebec Road and Cuddy Canyon Road: install approximately 1.27 linear miles of pipeline along Frazier Mountain Road between Wainright Court and Cuddy Canyon Road to move water from the new well to the Chimney Mountain storage tank. Approximately 3.64 acres of disturbance.
6. FMHS improvements: construct approximately 1.7 linear miles of new 4-inch drinking water pipeline, add a new 75hp/25-gallon per minute (gpm) booster pump station, and add a new 40,000-gallon water storage tank at FMHS. FMHS has an existing booster pump station, the new booster pump station will increase the number of stations serving FMHS to two (2). Approximately 5.17 acres of disturbance.

Construction equipment will include, but may not be limited, to the use of auger trucks, backhoes, excavators, compactors, scrapers, rollers, and lift trucks. Road paving may utilize earthmoving equipment, dozers, excavators and trucks, motor graders, cold planers, vibratory soil compactors, asphalt pavers, and compactors.

The area of potential effect (APE) for the project was defined as all ground-surface disturbance along with staging, lay-down and work areas. This included the two approximately 4-mi long total pipe corridors that are 100-ft wide, two existing tank locations, and a new tank location. All three tank APEs are approximately 1-acre in size. The horizontal APE is approximately 94acres (ac) in total size. The vertical APE, defined as the maximum depth of excavation, was 10-feet (ft).

1.3 REGULATORY CONTEXT

1.3.1 NHPA

The NHPA of 1966, as amended (54 United States Code § *et seq*.), is the primary federal legislation that outlines the federal government's responsibility to consider the effects of its actions on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment. Section 106 of the NHPA and its implementing regulations at 36 CFR Part 800 describes the process that the federal agency shall take to identify cultural resources and assess the level of effect that the proposed undertaking will have on historic properties. An undertaking is defined as a "…project, activity or program funded in whole or in part, under the direct or indirect jurisdiction of a federal agency." This includes projects that are carried out by, or on behalf of, the agency; those carried out with federal assistance; those requiring a federal permit, license, or approval; and those subject to state or local regulation administered pursuant to a delegation, or approval by, a federal agency.

A cultural resource is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. Those cultural resources that are listed on, or are eligible for inclusion in, the National Register of Historic Places (NRHP) are referred to as historic properties. The criteria for NRHP eligibility are outlined at 36 CFR Part 60. Other applicable federal cultural resources laws and regulations that could apply include, but are not limited to, the Native American Graves Protection and Repatriation Act (NAGPRA), and the Archaeological Resources Protection Act (ARPA).

Compliance with Section 106 of the NHPA (36 CFR Part 800) follows a series of steps that are designed to identify and consult with interested parties, determine the area of potential effects (APE), determine if historic properties are present within the APE, and assess the effects the undertaking will have on historic properties. Section 106 requires consultation with Indian Tribes concerning the identification of sites of religious or cultural significance and with individuals or groups who are entitled, or requested, to be consulting parties. The regulations at 36 CFR Part 800.5 require federal agencies to apply the criteria of adverse effect to the historic properties identified within the APE. The criteria of adverse effect, defined at 36 CFR Part 800.5(a)(1), states that:

> "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association."

The 36 CFR Part 800 regulations include consultation with the State Historic Preservation Officer (SHPO) to provide an opportunity to comment on, and concur with, a federal agency's determinations. If the undertaking would result in adverse effects to historic properties, these adverse effects must be resolved in consultation with the SHPO and other parties identified during the Section 106 process before the undertaking can proceed to implementation.

1.3.2 National Register Criteria for Evaluation

The criteria for evaluation of NRHP eligibility are outlined at 36 CFR Part 60.4. A district, site, building, structure, or object must generally be at least 50 years old to be eligible for consideration as a historic property. That district, site, building, structure, or object must retain integrity of location, design, setting, materials, workmanship, feelings, and association as well as meet one of the following criteria to demonstrate its significance in American history, architecture, archeology, engineering, and culture. A district, site, building, structure, or object must:

(A) be associated with events that have made a significant contribution to the broad patterns of history; or

(B) be associated with the lives of people significant in our past; or

(C) embody the distinct characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or

(D) have yielded, or may be likely to yield, information important in prehistory or history.

A site must have integrity and meet one of the four criteria of eligibility to demonstrate its historic associations in order to convey its significance. A property must be associated with one or more events important in the history or prehistory in order to be considered for listing under Criterion A. Additionally, the specific association of the property, itself, must also be considered significant. Criterion B applies to properties associated with individuals whose specific contributions to the history can be identified and documented. Properties significant for their physical design or construction under Criterion C must have features with characteristics that exemplify such elements as architecture, landscape architecture, engineering, and artwork. Criterion D most commonly applies to properties that have the potential to answer, in whole or in part, important research questions about human history that can only be answered by the actual physical materials of cultural resources. A property eligible under Criterion D must demonstrate the potential to contain information relevant to the prehistory and history (*National Register Bulletin* 15).

A district, site, building, structure, or object may also be eligible for consideration as a historic property if that property meets the criteria considerations for properties generally less than 50 years old, in addition to possessing integrity and meeting the criteria for evaluation.

1.3.3 CEQA

CEQA is applicable to discretionary actions by state or local lead agencies. Under CEQA, lead agencies must analyze impacts to cultural resources. Significant impacts under CEQA occur when "historically significant" or "unique" cultural resources are adversely impacted, which occurs when such resources could be altered or destroyed through project implementation. Historically significant cultural resources are defined by eligibility for or by listing in the California Register

of Historical Resources (CRHR). In practice, the federal NRHP criteria for significance applied under Section 106 are generally (although not entirely) consistent with CRHR criteria (see PRC § 5024.1, Title 14 CCR, Sections § 4852 and § 15064.5(a)(3)).

Significant cultural resources are those archaeological resources and historical properties that:

(A) Are associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Are associated with the lives of persons important in our past;

(C) Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or

(D) Have yielded, or may be likely to yield, information important in prehistory or history.

Unique resources under CEQA, in slight contrast, are those that represent:

an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC § 21083.2(g)).

Preservation in place is the preferred approach under CEQA to mitigating adverse impacts to significant or unique cultural resources.

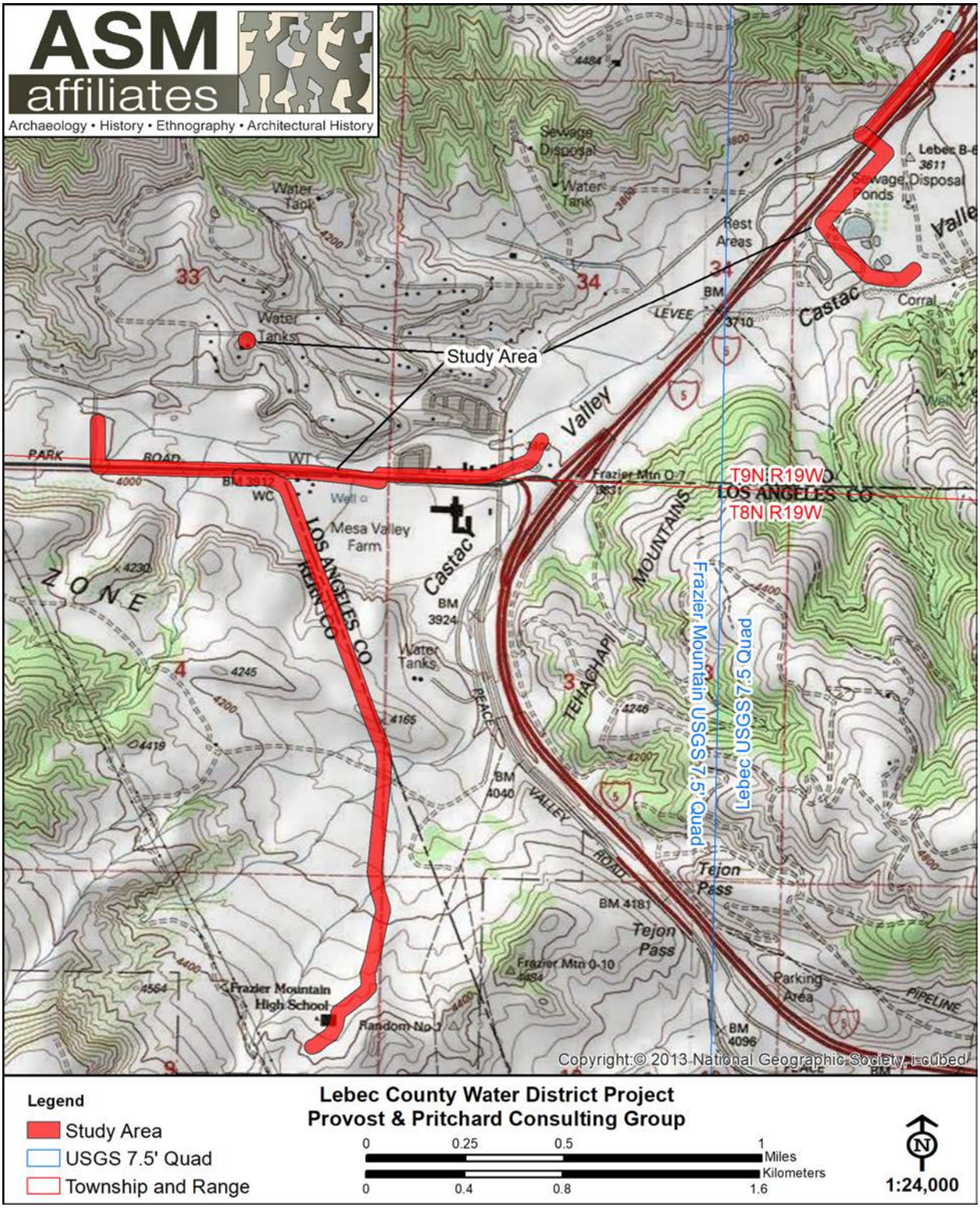


Figure 1. Location of the Lebec Project study areas, Kern County, California.

2. ENVIRONMENTAL AND CULTUAL BACKGROUND

2.1 ENVIRONMENTAL BACKGROUND AND GEOARCHAEOLOGICAL CONTEXT

As noted above, the study area encompasses portions of the Castac Valley. The western side of project comprises the northeastern slopes of Frazier Mountain, with seasonal drainages, tributaries of Castac Creek, running to the northeast. Frazier Mountain, the highest nearby summit, is about 4,550-ft amsl. A rugged, steep-sloped mountainous area is immediately east and west of Castac Valley, resulting in a landscape with highly variable topography. Elevation within the LCWD changes rapidly while moving across the landscape. In general, elevation ranges from a low of about 3565-ft amsl, to the northeast, to 4,388-ft amsl in the southwest. At the time of the Class III Inventory/ Phase I survey, the study area consisted of recently constructed school grounds (FHMS); residential development; existing rights-of-way of both dirt and paved roads (Cuddy Canyon Rd., Frazier Mountain Park Rd., Lebec Rd., Meadow Rd., and the Interstate 5 corridor); and undeveloped hilly terrain and valley floor.

The existing biotic environment partly reflects the physiographic and topographical variability of the region, but likely also reflects the position of the study area as a biogeographical transition zone between the western Mojave Desert, to the east, and the forested mountains on the west. Biotic zones include Joshua Tree woodlands, oak woodlands especially on the west, pinyon – juniper woodlands at higher elevations, riparian environments along drainages and in the sag ponds, sage scrub and chaparral communities, especially on lower elevation slopes, and prairie and steppe grasslands on the lower the open flats of Castac Valley. The biotic complexity of the study area can be generically labeled as “Mixed Chaparral” but we have attempted to include the dominant species that we observed on or immediately around each site.

The study area is within the San Emigdio/Tehachapi Mountains, characterized by high-energy degradational environments. According to the geoarchaeological model developed by Meyer et al. (2010), the study area has a very low potential for buried archaeological deposits. Intact buried sites and cultural resources are therefore considered to be unlikely within the Project APE.

2.2 ETHNOGRAPHIC CONTEXT

The general vicinity of the project area was apparently a contact point between five separate ethnolinguistic groups immediately prior to the arrival of Euro-Americans in California. Combined with the fact that almost no ethnographic research was conducted in this area until well after the period of Spanish missionization – and thus long after the original inhabitants had been removed from their traditional homelands – considerable confusion has existed concerning aboriginal landholdings in this area. A series of recent ethnohistorical studies, synthesized by W&S Consultants (2007), however, have done much to clarify this situation. This synthesis is summarized below, and it is now apparent that this general region was occupied by the Kitanemuk, Southern Valley Yokuts, Interior Chumash, Tataviam and Kawaiisu. Of this group of five, the Kitanemuk, Interior Chumash and Tataviam are the most likely occupants of the lands comprising the study area, per se.

The Interior Chumash (probably speakers of the Ventureño Chumash, itself a Hokan language) controlled upper Piru Creek, Grapevine Canyon, and the Gorman area, a few miles west of the study area limits. Their domain extended eastward beyond Castac (or Tejon) Lake (not modern Castaic Reservoir, which is considerably further south) on the Tejon Ranch, where the historic village of *Kashtiq* was located. Their territory exgended southeastwards to Quail Lake, known in Chumash as *Shraqang*. The Chumash then either occupied or lived very close to the western limits of the study area, perhaps including the area immediately around Quail Lake, a short distance west of the study area.

The Kitanemuk occupied the south and central "heart" of the Tehachapi Mountains and the adjacent northwestern end of the Antelope Valley. These are speakers of the Serran branch of the Takic (Uto-Aztecan) language stock, and they are sometimes referred to as Haminat. They were closely related linguistically to other Serran Takic groups, such as the Serrano proper and Vanyume, who lived along the northern front of the transverse ranges. The Kitanemuk however probably did not extend down onto the San Joaquin Valley floor, which was occupied by the Yokuts. The northwestern edge of Kitanemuk territory appears to have fallen between Tunas and Paso Creeks, judging from known village locations, with most of their territory extending eastwards. The Kitanemuk may have occupied the current study area, near the open flats of the Antelope Valley.

According to Kroeber (1925), however, a wedge of Tataviam speakers extended up into the Tehachapis, separating the Chumash from the Kitanemuk, perhaps by controlling the headwaters of Pastoria Creek. They also occupied the La Liebre Mountains and probably the westernmost end of the Antelope Valley (Johnson and Earle 1990:196). Information on the Tataviam is limited, according to King and Blackburn (1978), in part because they were removed from their territory and taken to Mission San Fernando in the eighteenth and early nineteenth century. But, based on a few existing word lists, descriptions provided by early travelers, mission placenames, and the recollections of other aboriginal informants, the Tataviam language is generally accepted as representing a Takic language of the Uto-Aztecan family (ibid). In this sense, it was related to other Takic languages in the Los Angeles County region, such as Gabrielino/Fernandeño (or Tongva) of the Los Angeles Basin proper, and the Kitanemuk.

The Tataviam are believed to have primarily inhabited the upper Santa Clarita drainage from about Piru eastwards to the Agua Dulce/Vasquez Rocks area; southwards as far as Newhall; and northwards to include the middle reaches of Piru Creek (on the west), and the Liebre Mountains and the westernmost fringe of the Antelope Valley on the east. Their northeastern boundary most likely ran along the southern foothills of the Tehachapi Mountains – thus within the study area – and then crossed to the southern slopes of the Sawmill Mountains and the Sierra Pelona, extending as far east as Soledad Pass, but they may have controlled Quail Lake and La Liebre Ranch, placing them within the study area. Ethnographically, at least, they do not appear to have controlled the San Andreas rift zone of Elizabeth Lake, Lake Hughes and the Leona Valley, which was occupied by the Kitanemuk, who also inhabited the eastern side of the Antelope Valley from approximately Neenach through the Fairmont Buttes area, to about the mouth of the Soledad Pass.

Only a few historic Tataviam villages have been identified; most of these are located on the southwestern side of Tataviam territory, near Piru Creek and (modern) Castaic Reservoir. But *hwi'tahovea* is a village at La Liebre Tejon Ranch headquarters (CA-LAN-3254/H), south of Highway 138. This was a historic (post-Mission) period village (i.e., the Mission records do not include references to this village), and thus it may have only been occupied after circa AD 1830. But putatively to the south of this site, an unidentified ridge contains another important village known as *kwitsa'o*. This is the village alternatively given in the Mission records as *cuecchao*, *quecchao* and (less likely) *quissaubit*, from which 53 baptisms at Mission San Fernando John Johnson, personal communication 2002). Note, however, that *hwi'tahovea* is a Serrano/Kitanemuk name. It thus seems possible that it is synonymous with the Tataviam name of *kwitsa'o*; that is, that these both refer to the same village. As this circumstance suggests, then, a fundamental lack of information on this group exists because, by 1810, all Tataviam had been baptized and many were absorbed by other groups through intermarriage. The last fluent speaker of Tataviam died in 1916 although Tataviam descendants still practice other components of their cultural traditions to this day.

The sum of the evidence, in other words, places the Tataviam with some certainty at La Liebre Ranch headquarters, south of Highway 138, perhaps at Quail Lake and, potentially though less certainly, into the Tehachapi Mountains. But a reasonable case can also be made for Chumash territory extending at least to the west edge of Quail Lake. The potential use of the study area by the Kitanemuk is less certain, but they also occupied portions of the western Antelope Valley and, for this reason, cannot be excluded as possible inhabitants either. The study area, in this sense, it probably best conceptualized as an area of contact and interaction between these three tribal groups.

Despite the proximity of the Chumash, Kitanemuk, Yokuts and Tataviam, historical accounts suggest that amity-enmity alliances may have partly structured regional inter-group relationships. The Chumash appear to have maintained an alliance with the Kitanemuk, and the Yokuts and Tataviam a similar relationship, with more strained relationships between these two alliance groups. Despite these possible political differences, all of the groups were culturally very similar.

The Chumash, for example, followed a hunting-gathering-fishing subsistence pattern which incorporated a heavy reliance on maritime resources, including pelagic and littoral fishes, and shellfish – at least for groups living along the coast. Indeed, the bountiful sea resources that they exploited along the Santa Barbara coast may have been a key factor in their evolutionary success: at the time of the arrival of the Spanish the Chumash had reached levels of population density, and complexities in social organization, unequaled worldwide by other non-farming groups. These included permanent coastal villages along the Santa Barbara Channel area containing as many as 1000 inhabitants, as well as a hierarchical sociopolitical organization consisting of at least two major chiefdoms. Further, based on recent reconstructions using mission registers, the Chumash appear to have had a matrilocal, and perhaps matrilineal, clan-based society.

The Interior Chumash of course lacked direct access to the marine resources that contributed to such unusually high population densities along the Santa Barbara coastline. Adaptation to the environment was therefore more closely tied to terrestrial resources, including especially the acorn-bearing oak, with cultural patterns in general very similar to surrounding interior groups,

such as the Yokuts. Notably, however, the Interior Chumash are particularly renowned for their rock paintings or pictographs, important concentrations of which are located on the San Emigdio Ranch and the Carrizo Plain (roughly 25 and 75 miles northwest of the Centennial study area, respectively.) Ethnographic information demonstrates that their cave paintings were made by shamans, and that they depict the supernatural experiences these medicine men had on their vision quests.

Less ethnographic information exists on the Kitanemuk and Tataviam. Like many south-central California groups, however, they may have been organized into recognized and distinct tribelets. These were land-owning groups linked by shared territory and descent from a common ancestor. The tribelet was headed by a chief who was assisted by a variety of assistants. A shaman also existed who served as religious officer but the shaman did not have any direct political authority in a strict sense. Like other groups in the region, their subsistence emphasized the acorn-bearing oak, with the addition of a wide variety of other plants and game.

2.2.1 Significant Themes

The ethnographic period in the southern San Joaquin Valley and Tehachapi/San Emigdio Mountains extended from first Euro-American contact, in AD 1772, to 1853, when tribal populations were first moved onto the Sebastian reservation on what is now the Tejon Ranch. The major historic themes during this period of significance involve the related topics of Historic-Aboriginal Archaeology, and Native American Ethnic Heritage. More specifically, these concern the Adaptation of the Indigenous Population to Euro-American Encroachment and Settlement, and their Acculturation to Western Society. These processes included the impact of missionization on this region (circa 1800 to about 1845); the introduction of the horse and the development of a San Joaquin Valley "horse culture," including raiding onto the coast and Los Angeles Basin (after about 1810); the use of the region as a refuge for mission neophyte escapees (after 1820); responses to epidemics from introduced diseases (especially in the 1830s); armed resistance to Euro-American encroachment (in the 1840s and early 1850s); and, ultimately, the adoption of the Euro-American society's economic system and subsistence practices and acculturation into that society, partly through reservation life.

2.2.2 Associated Property Types

Site types that have been identified in the region dating to the ethnographic period of significance primarily include villages and habitations, some of which contain cemeteries. The different social processes associated with this historical theme may be manifest in the material cultural record in terms of changing settlement patterns and village organization; the breakdown of traditional trading networks with their replacement by new economic relationships; changing subsistence practices, especially the introduction of agriculture initially via escaped mission neophytes; the use of Euro-American artifacts and materials rather than traditional tools and materials; and, possibly, changing mortuary practices.

Inasmuch as culture change is a primary intellectual interest in archaeology, ethnographic villages and habitations may be NRHP eligible under Criterion D, research potential. They may also be eligible under Criterion A, association with events contributing to broad patterns of history.

Ethnographic sites, further, may be NRHP eligible as Traditional Cultural Properties due to potential continued connections to tribal descendants, and their resulting importance in traditional practices and beliefs, including their significance for historical memory, tribal- and self-identity formation, and tribal education. For Criteria A and D, eligibility requires site integrity (including the ability to convey historical association for Criterion A). These may include intact archaeological deposits for Criterion D, as well as setting and feel for Criterion A. Historical properties may lack physical integrity, as normally understood in heritage management, but still retain their significance to Native American tribes as Traditional Cultural Properties if they retain their tribal associations and uses.

2.3 PREHISTORIC BACKGROUND

The Tehachapi Mountains and western Antelope Valley region, even though far from remote from other portions of California, has received minimal archaeological attention compared to other areas of the state. In part this is probably due to the fact that the majority of California archaeological work has concentrated in the Sacramento Delta, Santa Barbara Channel and central Mojave Desert areas. Although our knowledge of the prehistory of this region is therefore limited in specific details, enough is known to determine that the archaeological record is broadly similar to south-central and central California as a whole (W&S Consultants 2007; ASM Affiliates 2014). Based on this fact, the general prehistory of the region containing the Centennial study area can be outlined as follows.

Initial occupation of the region occurred at least as early as the Paleoindian Period, or prior to about 10,000 YBP (years before present). Evidence of this early use of the region has been revealed by the discovery of characteristic fluted and stemmed points found around the margins of Tulare and Buena Vista Lakes, in the foothills of the Sierra, and in the Mojave Desert proper. (In each case these are locations that are many miles distant from the study area.)

Both fluted and stemmed points are particularly common around the lake margins, suggesting a terminal Pleistocene/early Holocene lakeshore adaptation similar that found in other portions of the far west at this same time, although little else is known about these earliest peoples. Additional finds consist of a Clovis-like projectile point discovered in a flash-flood cut-bank near White Oak Lodge on the Tejon Ranch in 1953, northeast of the study area. More recently, a similar fluted point has been found near Bakersfield, while a number are known from the Edwards Air Force Base and Boron area of the western Mojave Desert. Although it has now been well-established that human occupation of the state occurred during the Late Pleistocene, little can yet be inferred about the nature and distribution of this occupation.

Substantial evidence for human occupation of California first occurs during the middle Holocene, from roughly 7500 to 4000 YBP. This period is known as the Early Horizon, and is sometimes alternatively referred to as the Early Millingstone along the Santa Barbara Channel. In this southern area, population concentrated along the coast, with minimal visible use of inland areas. Adaptation appears to have emphasized hard seeds and nuts, with tool-kits dominated by mullers and grindstones (manos and metates). Minimal evidence of Early Horizon occupation has been found in most inland portions of the state. In part this is due to a severe cold and dry paleoclimatic period which occurred at this time.

Evidence for an Early Millingstone occupation of this specific region is, admittedly, very limited, and has been found at only three sites, located in the Santa Clara River Valley, to the south. In two cases, temporal attribution was based on the presence of a small number of Olivella barrel beads. Such bead types have subsequently proven unreliable temporal indicators, throwing doubt on significant human inhabitation of this region before about 4000 years ago. Further, excavations at one of these putative early locales, the Escondido Canyon Site, failed to uncover evidence for occupation prior to about 2700 years B.P. (W&S Consultants 2007). At the third site, on the Newhall Ranch, a late Early MIllingstone Horizon occupation was hypothesized based on the presence of significant quantities of metates in the lowest stratigraphic level of the site deposit (Waugh 1999), which was a former walnut orchard and is currently a farm field. The concentration of large heavy artifacts at the base of the deposit is almost certainly the result of their downward movements in the soil profile, accelerated by disturbance, rather than an in situ early deposit.

Perhaps not surprisingly, Phase II test excavations for the Tejon Mountain Village project, a short distance north of the current study area, failed to find evidence of Early Horizon occupation of the Tehachapi Mountains, although it is possible that some use of the area occurred that left little or no visible archaeological trace (W & S Consultants 2005). Furthermore, the lack of evidence for Early Horizon occupations at the base of subsequent Middle Horizon deposits during the excavations for that project indicates that, if there was an Early Horizon use of the area, it was culturally discontinuous with the subsequent occupants of the Tehachapis. Regardless of specifics, it is clear that Early Horizon population density was low in interior south-central California overall, and, if any kind of occupation and specialized subsistence adaptation existed, it was probably tied to plant food gathering rather than hunting.

Environmental conditions improved dramatically after about 4000 YBP, during the Middle Horizon (or Intermediate Period). This period is known climatically as the Holocene Maximum and it was characterized by significantly warmer and wetter conditions than were experienced previously. Archaeologically it was marked by a large population increase and radiation into new environments along the south-central California coast and the Mojave Desert. In the Delta region to the north, this same period of favorable environmental conditions was marked by the appearance of the Windmiller culture which exhibited a high degree of ritual elaboration (especially in burial practices) and perhaps even a rudimentary mound-building tradition (Meighan, personal communication, 1985). Along with ritual elaboration, Middle Horizon times experienced increasing subsistence specialization, perhaps correlating with the appearance of the acorn processing technology. Penutian speaking peoples (which would include the Yokuts) are also posited to have entered the state roughly at the beginning of this period and, perhaps, to have brought this technology with them (cf. Moratto 1984). Likewise, the so-called "Shoshonean Wedge" in southern California, or the Takic speaking groups that included the Gabrielino/Fernandeño, Tataviam and Kitanemuk, may have moved into this region at this time (Sutton 2009), rather than at about 1500 BP as first suggested by Kroeber (1925).

Evidence for Middle Horizon occupation of the Upper Santa Clara/Agua Dulce region, south of the study area, is substantial, in that it has been found at a number of sites and has been based on radiocarbon, obsidian hydration and typological dating. The Agua Dulce village complex, for example, includes occupation extending back to this period, at which point population of the

village may have been 50 or more people. Similarly, the inhabitation of the Hathaway Ranch region, near Lake Piru, and on Newhall Ranch, near Valencia, appears to have begun during the Intermediate Period (W & S Consultants 2007). To the northwest, there is little or no evidence for pre-Middle Horizon occupation in the upper Sisquoc and Cuyama River drainages. Also to the northwest, on the Carrizo Plain, appears to have experienced a major population expansion during the Middle Horizon (Whitley et al. 2007).

Phase II test excavations for the Tejon Mountain Village project, north of the current project, demonstrated a substantial Middle Horizon occupation in the Tehachapis; all tested habitation sites included at least some deposit from this period, and some of the villages were only inhabited at this time. The existing evidence now suggests that a similar pattern occurred in the inland Ventura County region, as well as possibly in the Antelope Valley and western Mojave Desert, the southern Sierra Nevada, and the Coso Range region. In all of these areas, a major expansion in settlement, the establishment of large site complexes, and an increase in the range of environments exploited appear to have occurred sometime roughly around 4,000 years ago. Although most efforts to explain this expansion have focused on very local circumstances and events, this was a major Southern California-wide occurrence (ASM Affiliates 2014).

The beginning of the Late Horizon is set variously at 1500 and 800 B.P., although a consensus seems to be growing for the shorter chronology for this time period. Regardless of specific date, the appearance of the Late Horizon correlates with another series of periodic droughts at circa A.D. 800-1200 which decimated major portions of western North America. This is known, climatically, as the Medieval Climatic Anomaly, followed by the Little Ice Age, and this general period of climatic instability extended to about A.D. 1860. In much of inland south-central California, the Carrizo Plain, and the Mojave Desert, including in the Antelope Valley, a large-scale abandonment of sites occurred approximately at the start of this period (Whitley et al. 2007). For the ancestral Chumash, this appears to correlate with an increase in coastal populations, suggesting a shift from inland to seashore occupation rather than a drop in total numbers of people. Along Buena Vista Lake, in the southern San Joaquin Valley, population appears to have been increasingly concentrated towards the later end of the Medieval Climatic Anomaly (Culleton 2006).

Based on the results of the Phase II testing for the Tejon Mountain Village project, however, the Late Horizon circumstances did not result in wide-spread abandonment of the Tehachapi Mountains. This area is unusually well-watered and probably was not subjected to the same degree of desiccation as occurred elsewhere in interior south-central California. Some Middle Horizon villages were abandoned before the start of the Late Horizon, but those sites with Late Horizon occupation appear to have been more intensively occupied during the last 1,000 years, and no significant population change has yet been identified. The Tehachapis experienced intensification rather than the abandonment seen in surrounding areas during the last millennium. Regardless of regional circumstance, the ethnographic Native American tribes and conditions are recognized as a direct outgrowth of the Late Horizon occupations of this portion of south-central California.

2.3.1 Significant Themes

Previous research and the nature of the prehistoric archaeological record suggest two significant themes, both of which fall under the general *Prehistoric Archaeology* area of significance. These

are the *Expansion of Prehistoric Populations and Their Adaptation to New Environments*; and *Adaptation to Changing Environmental Conditions*.

The *Expansion of Prehistoric Populations and Their Adaptation to New Environments* theme primarily concerns the Middle Horizon/Holocene Maximum. Its period of significance runs from about 4,000 to 1,500 YBP. It involves a period during which the prehistoric population appears to have expanded into a variety of new regions, developing new adaptive strategies in the process.

The *Adaptation to Changing Environmental Conditions* theme is partly related to the Holocene Maximum, but especially to the Medieval Climatic Anomaly. The period of significance for this theme, accordingly, extends from about 4,000 to 800 YBP. This theme involves the apparent collapse of many inland populations, presumably with population movements to better environments such as the coast. It is not yet known whether the southern San Joaquin Valley, with its system of lakes, sloughs and swamps, experienced population decline or, more likely, population increase due to the relatively favorable conditions of this region during this period of environmental stress.

2.3.2 Associated Property Types

Given the physiographic and hydrographic nature of the San Joaquin Valley (low-lying alluvial flats prehistorically containing streams, sloughs, swamps and lakes), two primary site types can be expected for both themes: villages and camps, and resource exploitation/special activity areas. Archaeological evidence potentially pertinent to these themes could include settlement locations and sizes, trade patterns, and especially subsistence evidence.

Prehistoric sites would be primarily eligible under NRHP Criterion D, research potential. Eligibility would require integrity in the form of intact archaeological deposits, including preserved stratigraphic relationships, internal site features, and artifact associations.

2.4 HISTORIC BACKGROUND

Perhaps because of its distance from the coast and then-existing communication routes, Euro-American settlement and development of the San Emigdio Mountains/ Tejon Ranch/Tehachapi Mountains region was a little later dating than in other parts of southern California. As a result, its early Euro-American history to about the 1850s principally involved the explorers who traversed the area. The Tehachapis, Upper Santa Clara Valley and Antelope Valley region was traversed by a series of the most famous explorers of California during this part of its history. For example, Pedro Fages crossed the area in 1772, passing through Lake Hughes and Tejon Pass; Fr. Garcés, with de Anza, traveled through the Lake Hughes and Castaic region and probably spent a week on what would become the Tejon Ranch, in 1776; Fr. Jose Maria Zaldivea, coming from Santa Barbara in 1806, found Castac Lake and Cañada de las Uvas (Grapevine Canyon); Jedediah Smith, in 1827, also went through the region during his fur-trapping expedition; as did John C. Frémont and his guides, Kit Carson and Alex Godoy, in 1830 and 1844. And in 1847-1848, Frémont spent the winter in the original Tejon Pass area, now known as Tehachapi Pass, on the Tejon Ranch (ASM Affiliates 2014).

During the latter portion of this exploratory period, from 1843 to 1846, grants for four large ranches were awarded that, eventually, would be united into the Tejon Ranch by Edward Fitzgerald Beale between 1855 and 1865. Most likely, this flourish of interest in this then isolated portion of southern California was precipitated by the discovery of gold in Placerita Canyon, to the south of the Tejon, in 1842. The first of these awards was the Rancho Los Alamos y Agua Caliente ("cottonwoods and hot water"), acquired by Pedro Carillo from Governor Micheltorena on 2 October 1843. Less than two months later (11 November 1843), the original Rancho El Tejon ("the badger") was awarded to José Antonio Aguirre and Ignacio del Valle by the governor, representing a grant of almost 100,000 acres. Less than two weeks subsequently (22 November 1843), the approximately 22,000 acres Rancho Castac (Chumash for "spring-eye"; in Spanish "*ojo de agua*") was obtained by José Maria Covarrubias. Finally, on 21 April 1846, Rancho La Liebre ("the hare") was granted to José Maria Flores. It was 11 square leagues, or almost 49,000 acres in size (ibid.). The study area primarily falls within Rancho La Liebre, with a small southwestern portion of it extending into fee lands that were not originally part of these land grants.

Partly influenced by the political and other disruptions that occurred at the end of the 1840s, including conflict with tribes in the southern San Joaquin Valley, these land grants were all but unused by their grantees. One result was an early encroachment on them by Euro-Americans who assumed the lands were unclaimed and therefore open for settlement, or who knew about the land grants but paid them little heed. For example, in spring, 1850, Dr. Darwin French moved onto Tejon Ranch proper and built an adobe. Due to unrest among Native Americans in the southern Sierra Nevada, he departed in 1851, subsequently becoming renowned for his involvement in the exploration and settlement of the Death Valley region. Likewise, Alonzo Ridley and David McKenzie came into the Tejon region to trade with the Native Americans in May 1852. Around this same time Samuel A. Bishop moved into the area, settling on what was Castac Rancho (ASM Affiliates 2014). But probably the best known, and ultimately most important, of the early "settlers" who, in effect, squatted on rancho lands, was Edward F. Beale, who in 1853 created the first Indian reservation on what he thought was unclaimed land, available for government use.

Beale (born 1822, died 1893), as noted above, ultimately united these four ranchos into the El Tejon Ranch between 1855 and 1865. His first purchase was Rancho La Liebre, which he acquired in 1855 for $1500.00. Beale purchased El Tejon for $21,000.00, and Los Alamos y Agua Caliente for $1700.00, in 1865. In 1866 he completed his empire with the purchase of Castac for $65,000.00. This had passed from the original grantee, Covarrubias, to Albert Packard of Santa Barbara, who subsequently sold it to Samuel Bishop. Beale purchased it from Bishop. Because the original Spanish land-grants for these ranchos did not represent a contiguous holding, Beale "re-adjusted" the boundaries of Los Alamos y Agua Caliente northward between Castac and La Liebre to form a unified property. The result was a ranch of about 265,000 acres – roughly half the size of the state of Rhode Island (ASM affiliates 2014).

Note that there are certain discrepancies in the historical accounts concerning these ranchos, particularly La Liebre. While there is agreement that this rancho was first awarded to one José Maria Flores, there were a number of individuals with this name in California in 1846 and there are contradictory statements concerning which one was the recipient. A small silver mine, La Trinidad, was purportedly also discovered on La Liebre in 1859, but that this never experienced significant production (W & S Consultants 2007).

Despite the discrepancy in the accounts, La Liebre Ranch was apparently first sold to William C. Walker on 2 August 1855 for $1500. Walker resold the 48,825 acres six days later for the same price to Beale's wife. This was the first land sale in the Antelope Valley. Shortly after the purchase, Beale built an adobe on the ranch and moved his family there (ibid).

Beale is an important, albeit somewhat overlooked, figure in southern California history. A descendant of a series of famous American naval heroes, he began his adulthood as a midshipman (and eventually Lieutenant) in the U.S. Navy. This brought him to California where he was a hero in the Battle of San Pasqual during the Mexican War and served as the official messenger who brought the first word of the discovery of gold at Sutter's Fort back to Washington, D.C., in 1848. Retiring from the Navy in 1851, he went to work as the California business agent for Commodore Stockton and Aspinwall's steamship company. In nine months, he netted $100,000.00 for this company, of which $13,000.00 was his commission. This provided the foundation for his ultimate wealth and signaled his business acumen (ibid).

Beale's personal familiarity with the Tejon region apparently began with his appointment as Commissioner of Indian Affairs for California and Nevada, by President Fillmore, in 1852. Unlike many associated with federal Indian affairs in the 19th century, Beale was both sympathetic towards and honest with his Indian charges. As noted above, he established the Sebastian Indian Reservation on the Tejon at the foot of the Tehachapis, near the old ranch headquarters on Paso Creek, which contained about 2500 Indians cultivating approximately 3000 acres of wheat, with 10 miles of irrigation ditches, by 1854 (W&S Consultants 2007).

The Sebastian Reserve, as it was officially known, was originally planned to cover 75,000 acres but, probably due to political reasons, was reduced in size to only 25,000 acres, and its boundaries were never surveyed (ASM Affiliates 2014). It territory is hence unclear, beyond certain specifically identified village locations and the fields around them. What is certain is that the reserve fell on the open flats of the southern San Joaquin Valley, extending southwards to include the mouths of the canyons, where permanent creeks debouched onto the valley floor. Villages were established at these canyon mouths, which provided water for farming, and fields were established immediately below; large deep ditches (rather than fences) were excavated around the irrigated fields to keep out cattle. The mouth of Grapevine Canyon may have contained the westernmost village on the reserve; others are known to have existed at the mouths of Live Oak, Pastoria, El Paso, Tejon and Chanac Creeks (above), as well as at some areas in between. The reservation was, thus, a long distance north of both Rancho La Liebre and the current study area.

At this same time Beale was also instrumental in convincing the U.S. Army that a fort would be well-situated on the Tejon, both to protect the Indians on the Sebastian Reservation from exploitation by Euro-Americans, and to prevent raiding into the greater Los Angeles Basin by "renegade" Indians from the Tulare County and Colorado River regions.

Initially a contingent of soldiers was quartered on El Paso Creek, at what was then the headquarters of the Sebastian Reserve. They were shifted to Fort Tejon, in what is now referred to as the "Tejon Pass," in 1854, near the modern town of Lebec. The fort fell on Rancho Castac, which was then owned by Bishop. The fort continued in use, with a break at one point, until the end of the Civil

War. A civilian settlement sprung-up around the fort and, at its peak, it was the third largest population center in southern California (after Los Angeles and El Monte). When finally abandoned on 11 September 1864, the fort was returned to Bishop, per the original terms of his agreement with the U.S. Army. Shortly thereafter, Castac Rancho (including the fort) was acquired by Beale.

Beale's success as Commissioner of Indian Affairs was apparently his downfall, as he found that treating the Indians fairly created many enemies among those concerned with using the Bureau of Indian Affairs as a source for illicit gains. He was forced out over trumped-up charges concerning the misappropriation of funds, despite the fact that he received strong support from the press and public. After demonstrating that the charges were invalid, Beale began his acquisition of the Tejon Ranch. With the purchase of the La Liebre Ranch, Beale moved into the Tejon region. His original home, the adobe at La Liebre Ranch headquarters, is still standing, and is the oldest structure in the Antelope Valley (W&S Consultants 2007). Ultimately Beale moved his residence to the El Tejon headquarters on El Paso Creeks. A fire in 1917 destroyed his original adobe there (ibid).

The purchase of the Tejon however did not terminate Beale's career as a public official. Subsequently he was appointed the first Surveyor-General of California and Nevada by President Lincoln; a Brigadier General for the State of California militia; and, by President Grant, Minister to the Austro-Hungarian Empire. In addition, Beale was instrumental in the creation of the U.S. Army Camel Corps, authorized by Jefferson Davis (who was then Secretary of War) in 1857. With this appointment, he brought camels into the Tejon region, where they were used for a number of years as pack animals (ASM Affiliates 2014).

During this period, and even though Fort Tejon was, for a decade, a "major" population center in southern California (with 920 inhabitants, exceeded only by Los Angeles, with 4385, and El Monte, with 1004), the Tejon was still geographically remote and isolated. Granted, it was traversed by the first stage route, the Butterfield Overland mail stage established in 1858, which had stops at Lake Elizabeth, Cow Springs, Fort Tejon and the "Sinks of the Tejon" ("Los Alamitos," below the confluence of the Tejon and Chanac Creeks) on the ranch. But the stage was somewhat of a draw to outlaws: for many years the ranch was known as the "Refuge of the Bandits," and served as a haunt for Joaquin Murrieta and Tiburcio Vasquez and their gangs. Moreover, because of various economic competitions with the directors of the Southern Pacific Railroad, the rails were routed 50 miles to the east, through the Antelope Valley, to avoid traversing Beale's land in 1876, continuing its geographical isolation from other parts of southern California (ibid).

Nonetheless the Overland stage route did enter the general region, skirting Quail Lake before heading to Gorman Station – the last stop before Fort Tejon. Quail Lake was originally known as La Laguna Seca, 'dry lake' (Latta 1976:31), and thus presumably did not hold perennial or potable water; hence the stage station at nearby Gorman. (Topographical conditions suggest that the stage route followed the path of Highway 138, south of Quail Lake and outside of the study area, staying on the flats to the south rather than unnecessarily traversing the hilly terrain on the north). The Gorman station was built by Charles Johnson and his wife Isabel in 1863, who constructed a log cabin "public house" at this spot. When Johnson died his wife continued to run the establishment and it became known as Rancho *La Viuda*, 'widow's ranch.' She eventually sold it to David

Alexander (who also owned Rancho San Emigdio), and he ultimately sold it to James Gorman, Sr., who was a veteran of the Mexican War and worked as a meat-hunter for Fort Tejon (W&S Consultants 2007).

Initially, the economic emphasis of the Tejon Ranch was in sheep and, at its peak, over 125,000 were grazing on the ranch. It was not until the 1880s, after a number of years of drought, that cattle were introduced on the ranch (although Beale had recorded the Tejon brand – the crescent and the cross – in 1865). By 1891, there were about 25,000 head of cattle and 7500 sheep grazing on the ranch. Following Beale's death in 1893, the ranch was inherited by his son, Truxton, who completed the transition to cattle (ASM Affiliates 2014).

Truxton Beale sold the Tejon Ranch in 1912 to a syndicate headed by Harry Chandler (original developer of the San Fernando Valley) and General Harrison Gray Otis (founder of the Los Angeles Times) for $3,000,000.00. This formed the nucleus of what has evolved into the modern Tejon Ranch Company. The syndicate increased the acreage of the ranch to 281,000 acres through a series of strategic purchases. Because cattle activities did not immediately prove profitable, sales of various rights-of-way to public utilities initially aided the company's cash flow. More recently, the ranch has operated in part by leasing acreage to various farming, oil and cattle interests. By 1957, 70% of the land of the Tejon Ranch was operated under lease (ibid).

The town of Lebec owes its name to Peter Lebec or Lebecque, an early explorer/trapper who was found buried under an oak on Fort Tejon. Lebec (which means “big nose”) had been killed by a grizzly in 1837. The development of the Lebec community occurred in the late nineteenth and early twentieth centuries and was largely tied to the “Ridge Route,” subsequently Highway 99 and now the I-5, which connected southern California with the San Joaquin Valley and northern California. The Lebec County Water District began serving the community in 1969. The Frazier Mountain High School, part of the Tejon Unified School District, opened at its current campus in 2004.

2.4.1 Significant Themes

Given Lebec’s relationship to the I-5 transportation corridor, its primary historic theme would be the rise of the automobile, 1890 – 1920 and properties associated with this roadway (National Park Service 1963).

2.4.2 Associated Property Types

Approaches to historical Euro-American archaeological research relevant to the region have been summarized by Caltrans (1999, 2000, 2007, 2008). These concern the general topics of travel and associated properties (hotels, gas stations, etc.), historical landscapes, agriculture and farming, irrigation (water conveyance systems), and mining. Caltrans has also identified an evaluation matrix aiding determinations of eligibility. The identified research issues include site structure and land-use (lay-out, land use, feature function); economics (self-sufficiency, consumer behavior, wealth indicators); technology and science (innovations, methods); ethnicity and cultural diversity (religion, race); household composition and lifeways (gender, children); and labor relations.

Principles useful for determining the research potential of an individual site or feature are conceptualized in terms of the mnemonic AIMS-R, as follows:

1. *Association* refers to the ability to link an assemblage of artifacts, ecofacts, and other cultural remains with an individual household, an ethnic or socioeconomic group, or a specific activity or property use.

2. *Integrit*y addresses the physical condition of the deposit, referring to the intact nature of the archaeological remains. In order for a feature to be most useful, it should be in much the same state as when it was deposited. However, even disturbed deposits can yield important information (e.g., a tightly dated deposit with an unequivocal association).

3. *Materials* refers to the number and variety of artifacts present. Large assemblages provide more secure interpretations as there are more datable items to determine when the deposit was made, and the collection will be more representative of the household, or activity. Likewise, the interpretive potential of a deposit is generally increased with the diversity of its contents, although the lack of diversity in certain assemblages also may signal important behavioral or consumer patterns.

4. *Stratigraphy* refers to the vertically or horizontally discrete depositional units that are distinguishable. Remains from an archaeological feature with a complex stratigraphic sequence representative of several events over time can have the added advantage of providing an independent chronological check on artifact diagnosis and the interpretation of the sequence of environmental or sociocultural events.

5. *Rarity* refers to remains linked to household types or activities that are uncommon. Because they are scarce, they may have importance even in cases where they otherwise fail to meet other thresholds of importance (Caltrans 2007:209).

For agricultural sites, which are may be pertinent to the current study area, Caltrans (2007) has identified six themes to guide research: Site Structure and Land Use Pattern; Economic Strategies; Ethnicity and Cultural Adaptation; Agricultural Technology and Science; Household Composition and Lifeways; and Labor History. Expected site types would include farm and ranch homesteads and facilities, line camps, and refuse dumps. In general terms, historical Euro-American archaeological sites would be evaluated for NRHP eligibility under Criterion D, research potential. However, they also potentially could be eligible under Criteria A and B for their associative values with major historical trends o duals, and C for potential design or engineering importance.

Page is intentionally blank

3. ARCHIVAL RECORDS SEARCH

An archival records search was conducted at the California State University, Bakersfield, Southern San Joaquin Valley Archaeological Information Center (AIC), by AIC staff members to determine: (i) if prehistoric or historical archaeological sites had previously been recorded within the study area; (ii) if the project area had been systematically surveyed by archaeologists prior to the initiation of this field study; and/or (iii) whether the region of the field project was known to contain archaeological sites and to thereby be archaeologically sensitive. Additionally, a search of the NAHC *Sacred Lands File* was conducted in order to ascertain whether traditional cultural places or cultural landscapes had been identified within the APE. The results of this archival records search are summarized here.

According to a records search of the Native American Heritage Commission Sacred Lands Files and the Southern San Joaquin Valley Information Center, California State University, no cultural resources are known to exist within the study area. Seventeen (17) previous surveys have partially covered the study area (Table 1) and an additional eighteen (18) previous surveys have been completed within 0.5-mi of the study area (Table 2). As a result of these studies, twenty-seven (27) cultural resources were identified within 0.5-miles of the study area (Table 3).

Table 1. Survey Reports within the Study Area

Report No.	Year	Author (s)/Affiliation	Title
KE-00354	1980	AB Clayton/ Caltrans	Archaeological Survey Report for the Lebec Roadside Rest Areas
KE-00356	1982	MG Cottrell/ Archaeological Resource Management Corporation	Cultural Resources Survey Conducted for Mesa Valley Farm in the Frazier Park Area of Kern and Los Angeles Counties
KE-00523	1991	S Jackson / Cultural Resource Facility, CSU Bakersfield	An archaeological assessment of approximately 15.4 acres of land in the community of Frazier Park, Kern County, California
KE-00769	1994	R Osbourne / Cultural Resource Facility, CSU Bakersfield	Negative Archaeological Survey Report for DOT-06-KER-5, PM 0.0/1.0, EA 331901
KE-00863	1996	RE Parr / Center for Archaeological Research, CSUB	An Archaeological Assessment of Tentative Parcel Map No. 10141, Frazier Park, Kern County, California
KE-01028	1996	Unknown / Science Applications International Corporation, Environmental Programs Division	Cultural Resources Investigation Pacific Pipeline Emidio Route (Including West Liebre Gulch Ridge Alignment and Mojave Alternatives) L.A. and Kern Counties, CA
KE-01467	1996	R Schiffman / Individual Consultant	Archaeological Investigation for Frazier Mountain Country Club Commercial Center

Report No.	Year	Author (s)/Affiliation	Title
KE-01619	1988	MQ Sutton and K Acker / Cultural Resource Facility, CSU Bakersfield	An Archaeological Survey of 360 Acres Near Frazier Park, Kern County, California
KE-01906	1997	R Schiffman / Individual Consultant	Archaeological Investigation for CAL-CART Materials Proposed Aggregate Plant
KE-02369	1999	K Hovey / Caltrans	Negative Archaeological Survey Report: Rehabilitation of 57 On & Off Ramps, Route 5 & 99 0.0/15.0 and 0.0/47.406 PM
KE-02597	2001	D Whitley and JA Simon / W & S Consultants	Phase I Archaeological Survey of Frazier Mountain Country Club, Kern County, CA
KE-02683	2002	C Duke / LSA Associates, Inc.	Cultural Resource Assessment: AT&T Wireless Services Facility No. 07014A-01, Kern County, California
KE-02858	2003	JK Sander and RD Mason / Chambers Group, Inc	Cultural Resources Survey Southern California Gas Company Line 85 Natural Gas Pipeline Replacement Project Between Grapevine and Gorman Kern and Los Angeles Counties, California
KE-02956	2004	S Thal / Earth Touch	Proposed Cellular Tower Projects in Kern County, CA: Site CA-1365A/Cotton Pass & CA-1775C/ Castaic Valley
KE-03528	2006	C Arrington et al / SWCA Environmental Consultants	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California
KE-04877	2016	D Whitley et al / ASM Affiliates	Cultural Resource Studies, Hungry Valley State Vehicular Recreation Area, Gorman, California
KE-04884	2017	KC Roper / Far Western Anthropological Research Group, Inc.	Historic Resources Compliance Report Interstate 5 Vehicle Detection Systems at 21 Locations in Kern County, California

Table 2. Survey Reports within 0.5-miles of the Study Area

Report No.	Year	Author (s)/Affiliation	Title
KE-00052	1994	RH Osbourne/ Caltrans	Negative Archaeological Survey Report. Highway Project Description: District 06, Kern County, Route 5, Post Mile 0.55, Charge Unit 169, Expenditure Authorization 37620K
KE-00385	1993	D Fleagle/ Cultural Resource Facility, CSUB	An archaeological Assessment of Tentative Tract No. 9963, Between Frazier Park and Interstate 5, Kern County, California

Report No.	Year	Author (s)/Affiliation	Title
KE-00799	1989	RE Parr / Cultural Resource Facility, CSUB	An Archaeological Assessment of 19.81 Acres of Land Near Lebec, Kern County, California
KE-01282	1987	R Schiffman / Archaeological Research Fund, Bakersfield College	Archaeological Investigation for Frazier Park Kingdom Hall, Kern County, California
KE-01616	1988	R Schiffman / Individual Consultant	An Archaeological Survey of 160 Acres near Frazier Park, Kern County, California
KE-01667	1983	JJ Uli and RA Schiffman / Bakersfield College	Archaeological Investigation of Parcel Map No. 6435
KE-02290	1999	C Duke / LSA Associates, Inc.	Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA 292-21, Kern County, CA
KE-02291	1999	C Duke / LSA Associates, Inc.	Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA 902-01, Kern County, CA
KE-02481	2001	R Schiffman / Individual Consultant	Archaeological Investigation for Parcel Map No. 10734, Kern County, California
KE-02525	2001	SM Ptomey / Caltrans	Negative Archaeological Survey Report: 07- KER-5, PM R2.0/R3.0
KE-02767	2003	RA Schiffman and AP Gold / Individual Consultants	Archaeological Investigation for Contractor's Office, Warehouse, Storage Yard, and Residence
KE-02768	2003	RA Schiffman and AP Gold / Individual Consultants	Archaeological Investigation for Parcel Map No. 10848, Kern County, California
KE-02769	2003	RA Schiffman and AP Gold / Individual Consultants	Archaeological Investigation for a General Plan Amendment and Zone Change, Kern County, California
KE-02921	2004	RA Schiffman and AP Gold / Archaeological Associates of Kern County	Cultural Resource Survey for Tentative Tract No. 6203 at Houser Avenue and Lebec Road near Lebec, Kern County, CA

Report No.	Year	Author (s)/Affiliation	Title
KE-03017	2005	A Williams / Center for Archaeological Research, CSUB	A Cultural Resources Assessment for the Proposed Freedom Truck Wash, Frazier Park, Kern County, California
KE-03961	2009	RS Orfila / RSO Consulting Cultural and Historical Resources Management	Archaeological Survey for the Southern California Edison Company: Replacement of Two Deteriorated Power Poles on the Oak Creek Distribution Circuit and the other on the Ridge 12kV Circuit, Both in Kern County, California
KE-04458	2013	S Hudlow / HCRA	A Phase I Cultural Resource Survey for Frazier Mountain Community Church, Kern County, California
KE-04530	2011	S Loftus/ ACE Environmental	Cultural Resource Records Search and Site Survey AT&T Site: BKC342 (24318) Cuddy Canyon and Roads End 857 Roads End Point, Lebec, Kern County, California

Table 3. Resources within 0.5-miles of the Study Area

Primary #	Type	Description
P-15-002274	Site	Lithic scatter; collected
P-15-005433	Isolate	Prehistoric chert flake; destroyed
P-15-005434	Isolate	Prehistoric chert flake; destroyed
P-15-007740	Object	Historic Grapevine Pass
P-15-009867	Isolate	Prehistoric stone bowl
P-15-009868	Isolate	Prehistoric stone bowl
P-15-010300	Site	Prehistoric lithic scatter
P-15-010301	Site	Prehistoric lithic scatter
P-15-010562	Structure	Historic transmission line
P-15-010849	Site	Historic refuse scatter
P-15-010850	Site	Prehistoric lithics, Historic refuse
P-15-011568	Site	Historic cairn
P-15-015031	Structure	Historic Hotel Lebec
P-15-016146	Structure	Historic cabin
P-15-016147	Site	Historic foundation, refuse
P-15-016149	Structure	Historic culvert
P-15-016150	Structure	Historic culvert
P-15-016151	Structure	Historic culvert
P-15-016152	Structure	Historic culvert
P-15-018447	Voided	Duplicate resource

P-15-019172	Isolate	Prehistoric stone bowl
P-15-019176	Site	Prehistoric lithic scatter
P-15-019178	Site	Prehistoric lithic scatter
P-15-019179	Site	Historic refuse scatter
P-15-019182	Structure	Historic culvert; conveyance
P-15-019183	Site	Historic refuse scatter
2 isolated bowls	Isolate	Prehistoric stone bowls

A records search was also conducted at the Native American Heritage Commission (NAHC) Sacred Lands File (Confidential Appendix A). No sacred sites or tribal cultural resources were known in or in the vicinity of the study area. Outreach letters were then sent to the tribal contact list provided by the NAHC. Follow-up phone emails were made to all tribal groups on the contact list. A telephone call was received from Danelle Gutierrez of the Big Pine Tribe of Owens Valley, requesting more information about the Project. This was provided during the call. No concerns were then expressed about the Project. No other responses or concerns were received from any of the contacts, presumably indicating that there are no additional tribal concerns over the Project.

Page is intentionally blank

4. METHODS AND RESULTS

The project consists of the construction of an approximately 4-mi long total pipe corridors (portions of which may involve buried pipelines; e.g., in road crossings). The APE totaled approximately 94-acres

The study area was examined with the field crew walking parallel transects along the pipeline routes and tanks areas spaced at 15 meter intervals, in order to identify surface artifacts, archaeological indicators (e.g., shellfish or animal bone), and/or archaeological deposits (e.g., organically enriched midden soil); tabulation and recording of surface diagnostic artifacts; site sketch mapping; preliminary evaluation of site integrity; and site recording, following the California Office of Historic Preservation Instructions for Recording Historic Resources, using DPR 523 forms. A buffer 50 feet wide was included on each side of the pipeline route. Because the route primarily follows existing paved and unpaved roads, this resulted in survey on both sides of the roads.

Special attention was paid to rodent burrow back dirt piles, in the hope of identifying sub-surface soil conditions that might be indicative of archaeological features or remains. No cultural resources were collected during the survey.

The study area was surveyed by ASM Associate Archaeologist Robert Azpitarte, B.A., Associate Archaeologist. Fieldwork was conducted in November 2019. Soils vary throughout the study area and range from sandy-silty alluvium with very few lithic clasts. The study area consists of developed land, existing rights-of-way, and undeveloped land within and adjacent to Frazier Mountain High School, portions of the community of Lebec, and undeveloped areas of Castac Valley. Surface visibility was moderate to excellent throughout the Project APEs.

4.1 INVENTORY RESULTS

The APE survey areas consisted of two main pipeline corridors (Figure 2, 3, and 4), two existing well locations (Figure 5 and 6), and a proposed new well location within the Lebec County Water District service area (Figure 7). The APEs are in and around Frazier Mountain High School and the community of Lebec. The western pipe corridor is T-shaped and extends from north from the existing Frazier Mountain High School water tank, though southwestern Castac Valley, ending at an existing water facility (pump) near Frazier Mountain Park Rd. From this point, the corridor extends east and west along the Frazier Park Rd. right-of-way and through the Frazier Park travel stop. In total, this T-shaped corridor is approximately 15,500-ft feet in length and totals 70-acres in size.

The northeastern corridor begins near the southbound Lebec Rest Area exit and follows Interstate 5 southwest for a short distance before turning southeast across Interstate 5, and then continuing southwest on along existing LCWD maintenance road before wrapping southeast and east around a LCWD treatment pond and eventually terminating at the proposed new tank location just east of

the northbound Lebec Rest Stop. In total, this shorter corridor is approximately 5,300-ft feet in length and totals 22-acres in size.

The proposed APEs are within both developed and undeveloped land within Castac Valley. The western corridor is mostly undeveloped. Soil disturbances – due to road maintenance, grazing, and fence installation – were noted across the western corridor. The northeastern pipe corridor APE will involve disturbed rights-of-way (Frazier Mtn. Rd) and complete development on the east end (travel center).

Both existing tank locations are on elevated hill slopes with completely disturbed soils, next to residential development and the FMHS. The FMHS tank overlooks the Castac Valley and sits on disturbed soil adjacent to school facilities. From this proposed tank, the west pipe corridor follows an asphalt road for a short distance before extending into the valley to north. The proposed new tank located is located between the northbound Lebec rest stop and west of the Tejon Ranch Equestrian Center. This area is currently undeveloped and is bordered on the south and southeast by an intermittent wash that drains into the Castac Lakebed. Due to proximity to the rest stop and existing LCWD infrastructure, numerous disturbances (e.g. grading, construction and modern refuse) have occurred near this tank site.

The described areas above encompass the 94-acres of survey area for the proposed Project. No cultural resources of any kind were identified during the Class III inventory/Phase I survey.



Figure 2. Proposed T-shaped pipe corridor from FMHS to Frazier Mountain Park Rd., looking southeast towards FMHS.



Figure 3. Proposed T-shaped pipe corridor along Frazier Mountain Park Rd., looking east towards Frazier Park travel center.



Figure 4. Proposed pipe corridor along Interstate 5 towards new tank location, looking southwest.



Figure 5. Overview of existing tank location near FMHS, looking north.



Figure 6. Overview of existing tank location within Frazier Park community, looking southwest.



Figure 6. Overview of proposed new tank location near northbound Lebec rest area, looking southwest.

Page is intentionally blank

5. SUMMARY, NRHP ELIGIBILITY EVALUATION, AND RECOMMENDATIONS

An intensive Class III inventory/Phase I cultural resources survey was conducted for the Lebec County Water District and Frazier Mountain High School Water Project, Lebec, Kern County, California. The area of potential effect for the project was defined as all ground-surface disturbance along with staging, lay-down and work areas. This included an approximately 4-mi long ditch corridor that was 100-ft wide (portions of which may include underground pipelines); two existing tanks at Frazier Mountain High School; and a proposed new tank location near the northbound Lebec rest stop. The horizontal APE is approximately 94-acres (ac) in total size. The vertical APE, defined as the maximum depth of excavation, was 10-ft.

Records searches were also conducted at the Southern San Joaquin Information Center and the Native American Heritage Commission Sacred Land Files. No previously recorded cultural or tribal resources were known within or adjacent to the Project APE. Letters and follow-up emails were also made to tribal organizations on the NAHC contact list. No tribal cultural resources or concerns were identified in this effort.

No cultural resources of any kind were identified within the Project study area.

5.1 RECOMMENDATIONS

An archival records search, background studies, and an intensive, on-foot surface survey of the Lebec County Water District and Frazier Mountain High School Water Project, Lebec, Kern County, California, were conducted as part of a Class III inventory/ Phase I archaeological survey. No cultural resources of any kind were identified within the Project study area.

The proposed Lebec County Water District and Frazier Mountain High School Water Project therefore does not have the potential to result in adverse impacts or effects to historical properties or resources, and no additional archaeological work is recommended for it. It is recommended that an archaeologist be contacted in the unlikely event that archaeological resources are discovered during the construction or use of the pipeline and other Project facilities and features.

Page is intentionally blank

REFERENCES

ASM Affiliates

2014 *Phase II Test Excavations and Determinations of Significance, 18 Sites in the Grapevine Specific Plan Area, Kern County, California*. Report on file, Tejon Ranch Company.

2015 *Phase I Survey of 768 Acres and Phase II Test Excavation of 20 Archaeological Sites, Centennial Project, Los Angeles County, California*. Report on file, Tejon Ranch Company.

Caltrans

1999 *General Guidelines for Identifying and Evaluating Historic Landscapes*. Sacramento: Caltrans.

2000 Water Conveyance Systems in California: Historic Context Development and Evaluation Procedures. Sacramento: Caltrans.

2007 *A Historical Context and Archaeological Research Design for Agricultural Properties in California*. Sacramento: Caltrans.

2008 *A Historical Context and Archaeological Research Design for Mining Properties in California*. Sacramento: Caltrans.

Culleton, Brendan J.

2006 Implications of a Freshwater Radiocarbon Reservoir Correction for the Timing of the Late Holocene Settlement of the Elk Hills, Kern County, California. *Journal of Archaeological Science* 33:1331-1339.

Johnson, J., and D. Earle

1990 Tataviam Geography and Ethnohistory. *Journal of California and Great Basin Anthropology* 12:191-214.

King, C., and T. C. Blackburn

1978 Tataviam. In *California*, edited by R. F. Heizer, pp. 535-537. Handbook of North American Indians, Vol. 8, W. C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Kroeber, A. L.

1925 *Handbook of the Indians of California*. Bureau of American Ethnology, Bulletin 78. Washington, D.C.

Latta, F. F.

1976 *Saga of Rancho El Tejon*. Bear State Books, Santa Cruz.

Meyer, J, D. Craig Young, and Jeffrey S. Rosenthal

2010 *Volume I: A Geoarchaeological Overview and Assessment of Caltrans Districts 6 and 9.* Submitted to California Department of Transportation

Moratto, M.
1984 *California Archaeology*. Academic Press, New York.

National Park Service
1963 The National Survey of Historic Sites and Buildings: Theme XVIII – Travel and Communication. Washington, D.C.

National Register of Historic Places
1997 *How to Complete the National Register Registration Form*, National Register Bulletin 15, National Park Service, revised 1997.

Sutton, Mark Q.
2009 People and Language: Defining the Takic Expansion into Southern California. *Pacific Coast Archaeological Society Quarterly* 41(1&2):31-93.

W & S Consultants
2005 *Phase II Test Excavations and Determinations of Significance for 12 Archaeological Sites, Centennial Study Area, Northern Los Angeles, California*. Unpublished report on file, SCCIC, California State University, Fullerton.
2007 *Addendum: Phase II Test Excavations and Determinations of Significance within the Centennial Study Area, Northern Los Angeles, California*. Unpublished report on file, SCCIC, California State University, Fullerton.

Waugh, G.
1999 *A Study in the Prehistory of the Santa Clara River Valley: Archaeological Data Recovery at CA-LAN-2233, Los Angeles County, California*. Caltrans, Sacramento.

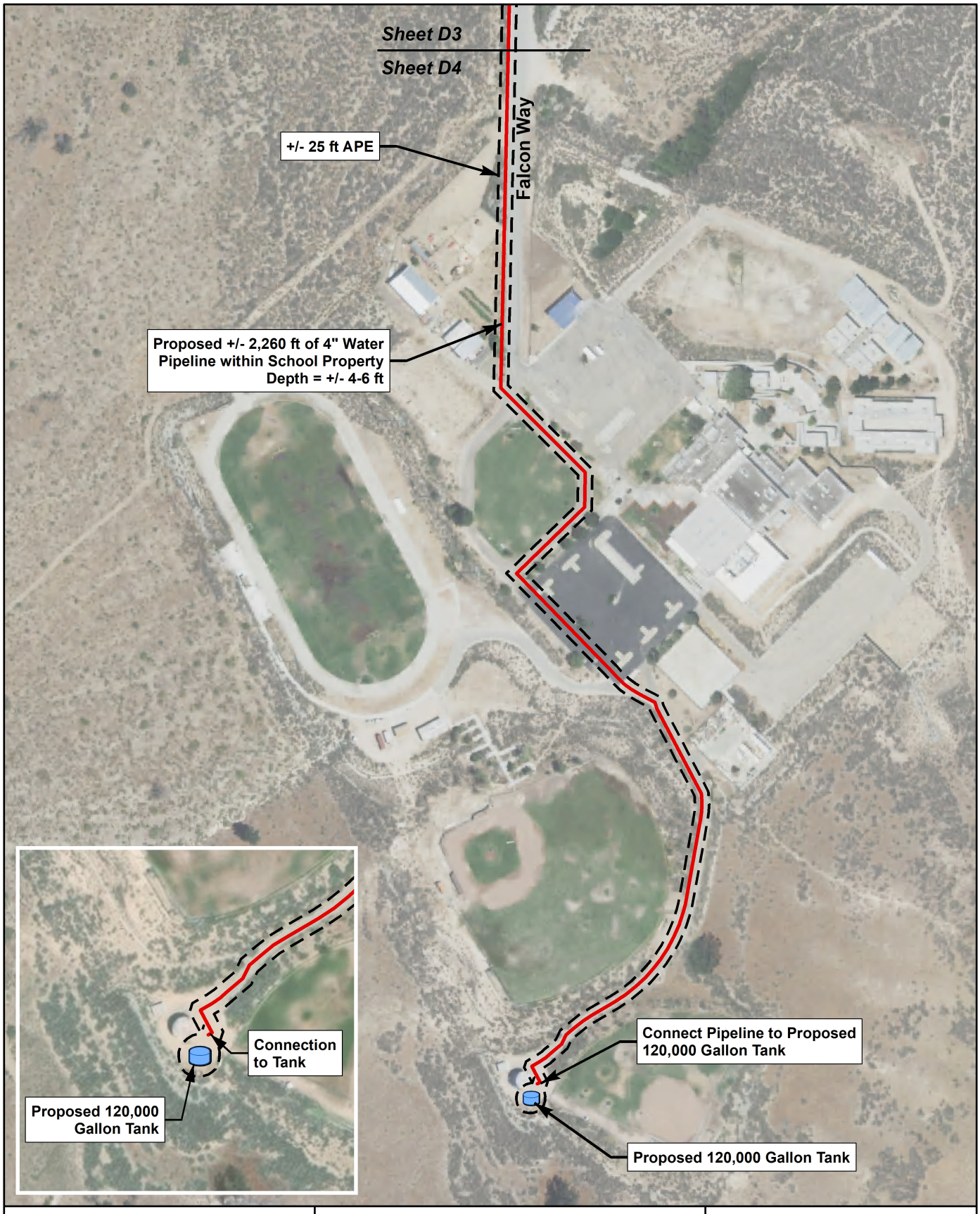
Whitley, David S., Joseph M. Simon, and Johannes H. N. Loubser
2007 The Carrizo Collapse: Art and Politics in the Past. In *Collected Papers in Honor of the Achievements of Archaeologist Jay von Werlhof*, edited by Russell L. Kaldenberg, pp. 199-208. Maturango Museum Press No. 20. Ridgecrest, California.

CONFIDENTIAL APPENDIX A:

Records Search and Native American Heritage Commission Outreach

Appendix D:

Proposed Facility Layouts



EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

N

0 100 200
Feet

APE
Proposed Pipeline to FMHS
Proposed 120,000 Gallon Tank

FMHS Water System Improvements

Lebec County Water District

Sheet D1

9/23/2020 : \\ppeng.com\pzdata\clients\Self Help Enterprises-1875\187517016-FMHS Water Supply Project\GIS\Map\Map Exhibits\tank_pipeline.mxd