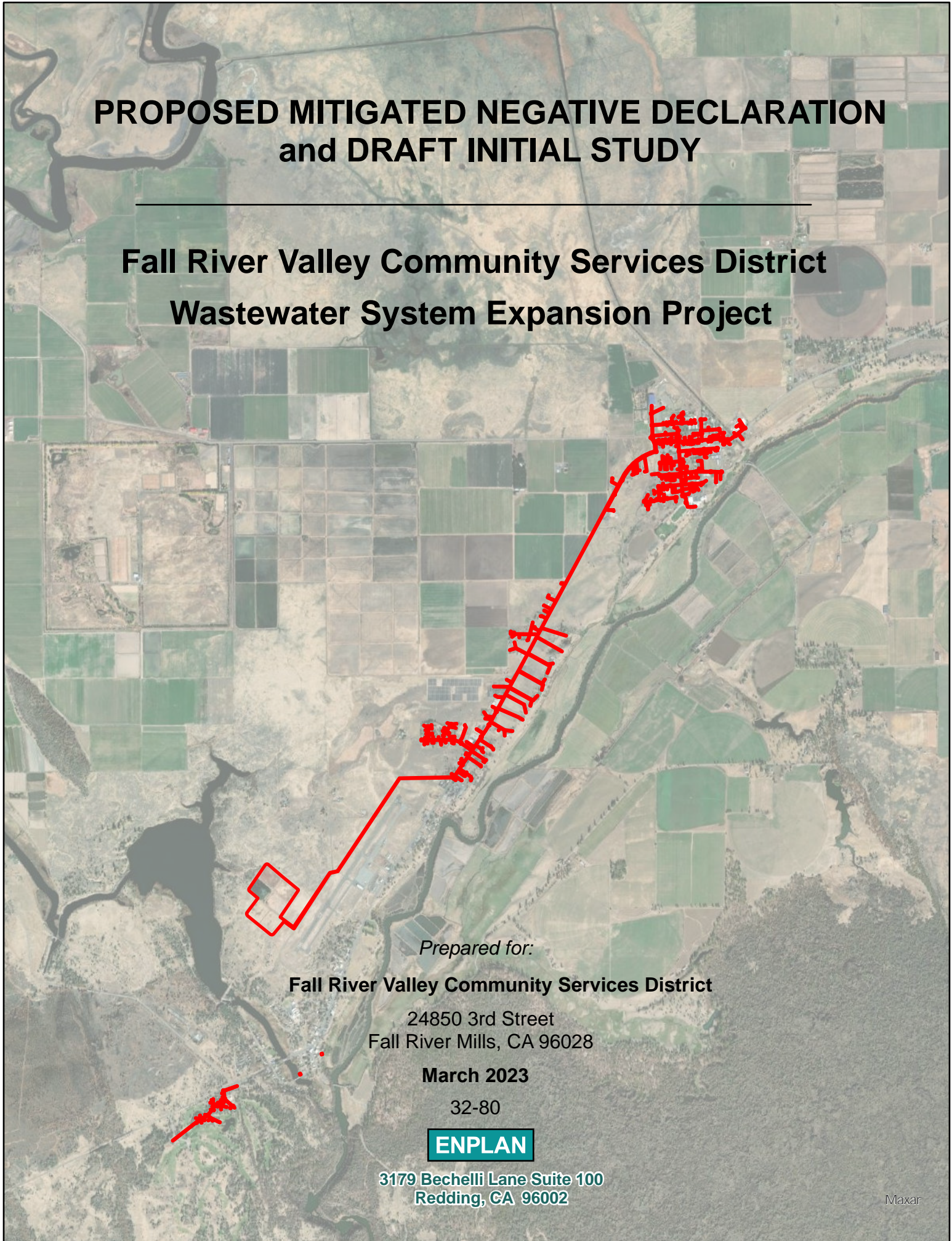


# PROPOSED MITIGATED NEGATIVE DECLARATION and DRAFT INITIAL STUDY

## Fall River Valley Community Services District Wastewater System Expansion Project



*Prepared for:*

**Fall River Valley Community Services District**

24850 3rd Street  
Fall River Mills, CA 96028

**March 2023**

32-80

**ENPLAN**

3179 Bechelli Lane Suite 100  
Redding, CA 96002

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# PROPOSED MITIGATED NEGATIVE DECLARATION

<b>LEAD AGENCY AND PROJECT PROPONENT</b>	Fall River Valley Community Services District
<b>PROJECT NAME</b>	<b>Wastewater System Expansion Project</b>
<b>PROJECT SUMMARY</b>	<p>The proposed project includes extending the Fall River Valley Community Services District's (FRVCSD) wastewater collection system to the community of McArthur, properties along State Route (SR) 299, and properties within the Sierra Center Subdivision and the Country Club Subdivision.</p> <p>Improvements include installing several thousand feet of force main and gravity sewer main, and installing manholes, cleanouts, laterals, and associated appurtenances throughout the study area. Two new lift stations would be installed in McArthur. Existing structures would be connected to the new sewer collection system. Septic tanks would be abandoned in accordance with Shasta County requirements.</p> <p>Improvements would be made to existing lift stations (LS) 1 (Bridge Street), LS 2 (Hospital), and LS 3 (River Street), including replacing existing pumps, motors, electrical components, controls, and piping. The concrete wet well liners at both LS 1 and LS 3 would be coated with a cementitious epoxy. Back-up level controls and supervisory control and data acquisition (SCADA) equipment would be installed at LS 1, LS 2, and LS 3.</p> <p>Improvements at the wastewater treatment plant (WWTP) include constructing a new aeration pond inside one of the existing ponds, constructing a new blower building to house the aeration system equipment, installing a new self-cleaning mechanical screen within the existing concrete headworks structure, and replacing electronic sensors in the headworks to tie in to the SCADA system. An existing Pacific Gas and Electric Company (PG&amp;E) transformer adjacent to Reynolds Road would be replaced, and electrical conduit and conductors would be installed underground from the transformer to the WWTP. Details regarding proposed improvements are included in Section 3.2 (Project Components/ Physical Improvements) of the Initial Study.</p>
<b>LOCATION:</b>	The project is located within the unincorporated communities of Fall River Mills and McArthur in Shasta County, generally 14 miles northeast of the unincorporated community of Burney and 14 miles west of the unincorporated community of Bieber ( <i>See Figures 1-5 of the Initial Study</i> ).

## **FINDINGS / DETERMINATION**

As documented in the Initial Study, project implementation could result in temporarily increased air emissions, potential impacts on special-status plants and wildlife species, possible disturbance of nesting birds (if present), possible impacts to wetlands and other waters of the U.S. and/or State, the introduction and spread of noxious weeds during construction, the inadvertent entrapment of wildlife, impacts to cultural resources and tribal cultural resources (if present), impacts to paleontological resources (if present), temporarily increased noise and vibration levels, and a possible permanent increase in noise levels in excess of Shasta County noise standards.

Design features incorporated into the project would avoid or reduce certain potential environmental impacts, as would compliance with existing regulations and permit conditions. Remaining impacts can be reduced to levels that are less than significant through implementation of the mitigation measures identified in Section 1.10 of the Initial Study. Because the FRVCSD will adopt mitigation measures as conditions of project approval and will be responsible for ensuring their implementation, it has been determined that the project will not have a significant adverse impact on the environment.

The final Mitigated Negative Declaration was adopted by the Board of Directors of the Fall River Valley Community Services District on \_\_\_\_\_, 2023.

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# INITIAL STUDY

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**FALL RIVER VALLEY COMMUNITY SERVICES DISTRICT**

**WASTEWATER SYSTEM EXPANSION PROJECT**

**SHASTA COUNTY, CALIFORNIA**

---

**LEAD AGENCY:**



**Fall River Valley Community Services District**  
24850 3rd Street  
Fall River Mills, CA 96028  
**530.336.5263**

**PREPARED BY:**

**ENPLAN**

3179 Bechelli Lane, Suite 100  
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**March 2023**

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# SECTION 1.0 INTRODUCTION

---

## 1.1 PROJECT SUMMARY

<b>Project Title:</b>	<b>Wastewater System Expansion Project</b>
<b>Lead Agency Name and Address:</b>	<b>Fall River Valley Community Services District</b> 24850 3rd Street Fall River Mills, CA 96028
<b>Contact Person and Phone Number:</b>	<b>Cecil Ray</b> , General Manager 530.336.5263 <a href="mailto:generalmgr@frvcsd.org">generalmgr@frvcsd.org</a>
<b>District's Environmental Consultant:</b>	<b>ENPLAN</b> 3179 Bechelli Lane, Suite 100 Redding, CA 96002

The proposed project includes the extension of the Fall River Valley Community Services District's (FRVCS D) wastewater collection system, upgrades to components of the existing collection system, and improvements to the wastewater treatment system. Developed properties that are currently served by on-site septic systems would be connected to the FRVCS D's wastewater system, and the septic systems would be abandoned in place in accordance with Shasta County Environmental Health Department (SCEHD) requirements. Details about the proposed project are included in Section 3.0 (Project Description) of this Initial Study.

## 1.2 PURPOSE OF STUDY

The FRVCS D, as Lead Agency, has prepared this Initial Study to provide the general public and interested public agencies with information about the potential environmental impacts of the proposed Wastewater System Expansion Project (project). This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified in California Public Resources Code (PRC) §21000 et seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. Pursuant to these regulations, this Initial Study identifies potentially significant impacts and, where applicable, includes mitigation measures that would reduce all identified environmental impacts to less-than-significant levels. This Initial Study supports a Mitigated Negative Declaration (MND) pursuant to CEQA Guidelines §15070.

The FRVCS D intends to apply for funding through the State Water Resources Control Board (SWRCB) Clean Water State Revolving Fund (CWSRF) Program partially funded by the U.S. Environmental Protection Agency (USEPA). In accordance with the Operating Agreement between the SWRCB and USEPA, and the State Environmental Review Process, this Initial Study has been prepared to address certain federal environmental regulations (federal cross-cutters), including regulations guiding the General Conformity Rule for the Clean Air Act (CAA), the federal Endangered Species Act (FESA), and the National Historic Preservation Act (NHPA). These requirements are addressed in Section 4.3 (Air Quality), Section 4.4 (Biological Resources), and Section 4.5 (Cultural Resources) of this Initial Study.

## 1.3 EVALUATION TERMINOLOGY

The environmental analysis in Section 4.0 is patterned after the Initial Study Checklist recommended in the State CEQA Guidelines. For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the proposed project. To each question, there are four possible responses:

- **No Impact.** The proposed project will not have any measurable environmental impact on the environment.

- **Less-Than-Significant Impact.** The proposed project has the potential to impact the environment; however, this impact will be below established thresholds of significance.
- **Potentially Significant Impact Unless Mitigation Incorporated.** The proposed project has the potential to generate impacts which may be considered a significant effect on the environment; however, mitigation measures or changes to the proposed project’s physical or operational characteristics can reduce these impacts to levels that are less than significant.
- **Potentially Significant Impact.** The proposed project will have significant impacts on the environment, and additional analysis is required to determine if it is feasible to adopt mitigation measures or project alternatives to reduce these impacts to less than significant levels.

## 1.4 ORGANIZATION OF THE INITIAL STUDY

This document is organized into the following sections:

- Section 1.0:**        **Introduction:** Describes the purpose, contents, and organization of the document and provides a summary of the proposed project.
- Section 2.0:**        **CEQA Determination:** Identifies the determination of whether impacts associated with development of the proposed project are significant, and what, if any, additional environmental documentation may be required.
- Section 3.0:**        **Project Description:** Includes a detailed description of the proposed project.
- Section 4.0:**        **Environmental Impact Analysis (Checklist):** Contains the Environmental Checklist from CEQA Guidelines Appendix G with a discussion of potential environmental effects associated with the proposed project. Mitigation measures, if necessary, are noted following each impact discussion.
- Section 5.0:**        **List of Preparers**
- Section 6.0:**        **Abbreviations and Acronyms**
- Appendices:**        Contains information to supplement Section 4.0.

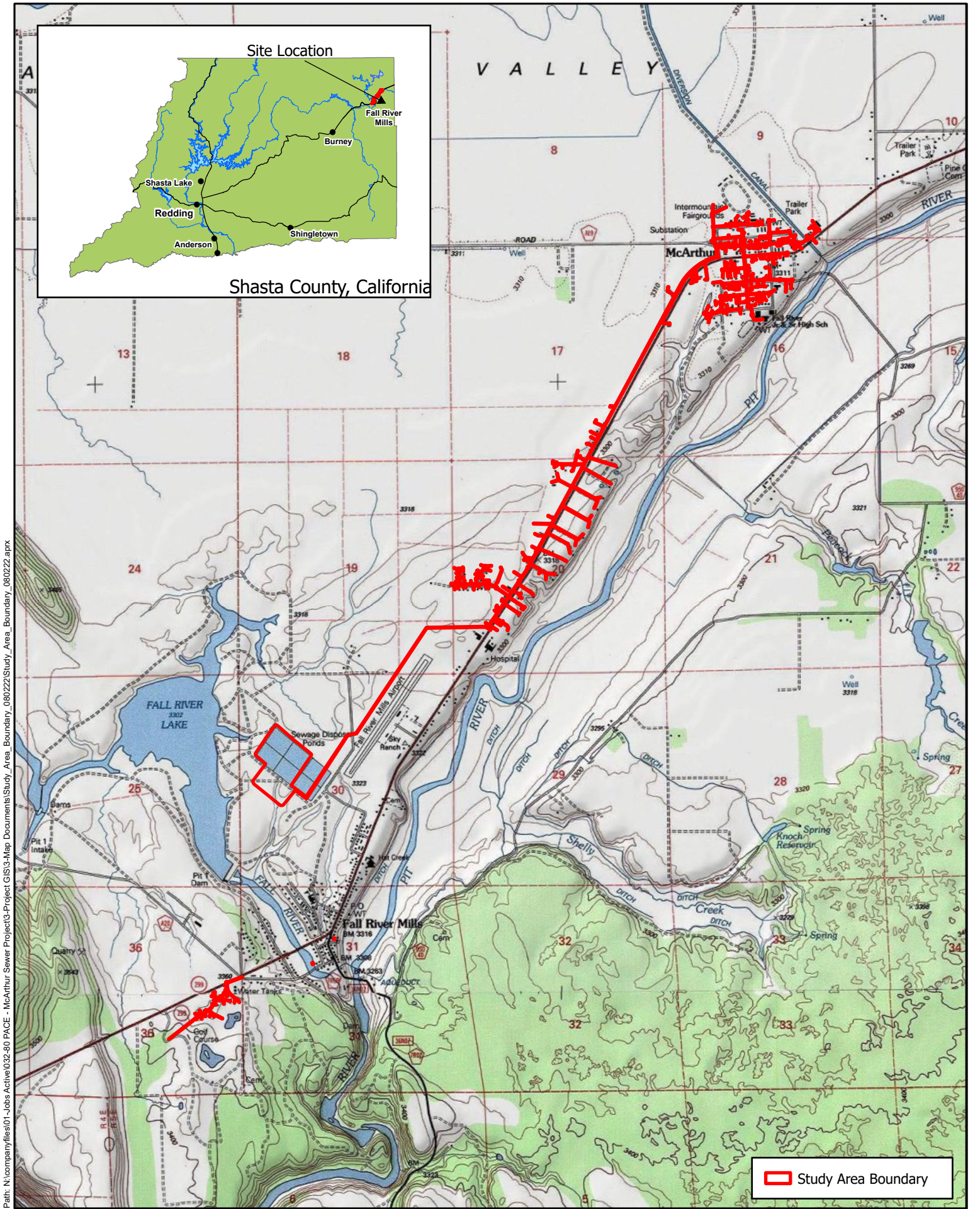
## 1.5 PROJECT LOCATION

As shown in **Figure 1**, Project Location and Vicinity Map, the unincorporated communities of Fall River Mills and McArthur are located generally 14 miles northeast of the unincorporated community of Burney and 14 miles southwest of the unincorporated community of Bieber, in Section 36, Township 37 North, Range 4 East of the U.S. Geological Survey (USGS) Fall River Mills and Hogback Ridge 7.5-minute quadrangles; and Sections 9, 16, 17, 19, 20, 30, and 31, Township 37 North, Range 5 East of the USGS Fall River Mills 7.5-minute quadrangle. Latitude: 41°01’36.39” N; Longitude: 121°25’19.94” W (centroid).

Improvements would occur throughout the community of McArthur (**Figure 2**); along and adjacent to the SR 299 corridor, including within the Sierra Center Subdivision (**Figure 3**); at the FRVCSD WWTP (**Figure 4**); and within the Country Club Subdivision (**Figure 5**). Improvements would also occur at LS 2 (Hospital) (**Figure 3**), and at LS 1 (Bridge Street) and LS 3 (River Street) (**Figure 4**). The majority of the improvements would occur in paved road rights-of-way (ROW) and graveled road shoulders, and in existing graveled alleyways in previously disturbed areas. Sewer laterals would be installed on private property, both in paved/graveled driveways and in lawn areas. The force main between LS 2 (Hospital) and the WWTP would be installed in overland areas on county-owned property (airport) and privately owned property. LS 3 is located in the road ROW of River Street. LS 1 and LS 2 are located within utility easements on privately owned property.

Temporary staging of construction materials and equipment would occur on the WWTP and LS 1 sites. Staging would also occur in the affected road ROW throughout the project area. No physical improvements are needed to establish the staging areas.





Path: N:\companyfiles\01-Jobs\Active\032-80 PACE - McArthur Sewer Project\GIS\3-Map Documents\Study\_Area\_Boundary\_080222.aprx

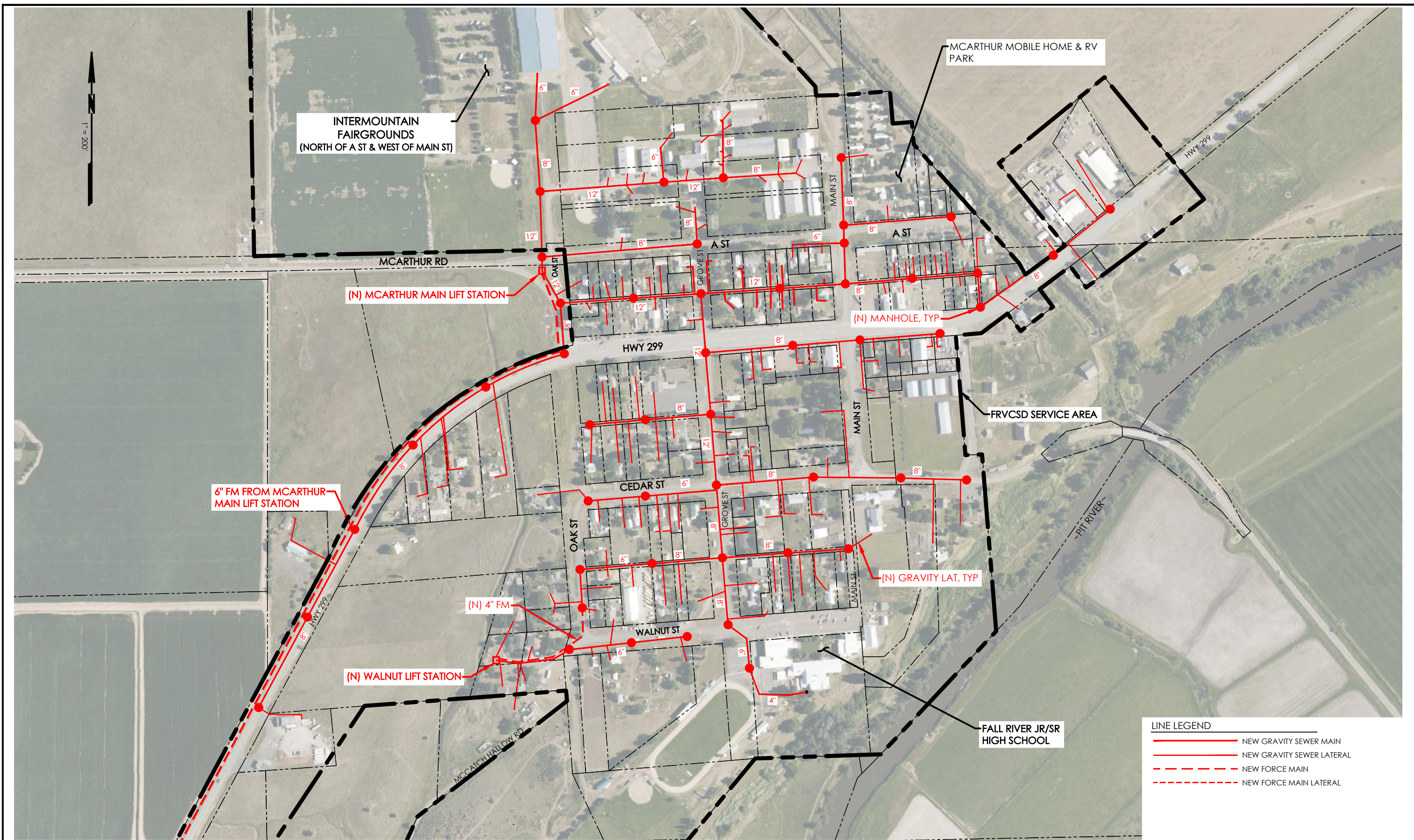
Figure 1

# Project Location and Vicinity

All depictions are approximate. Not a survey product. 08.17.22





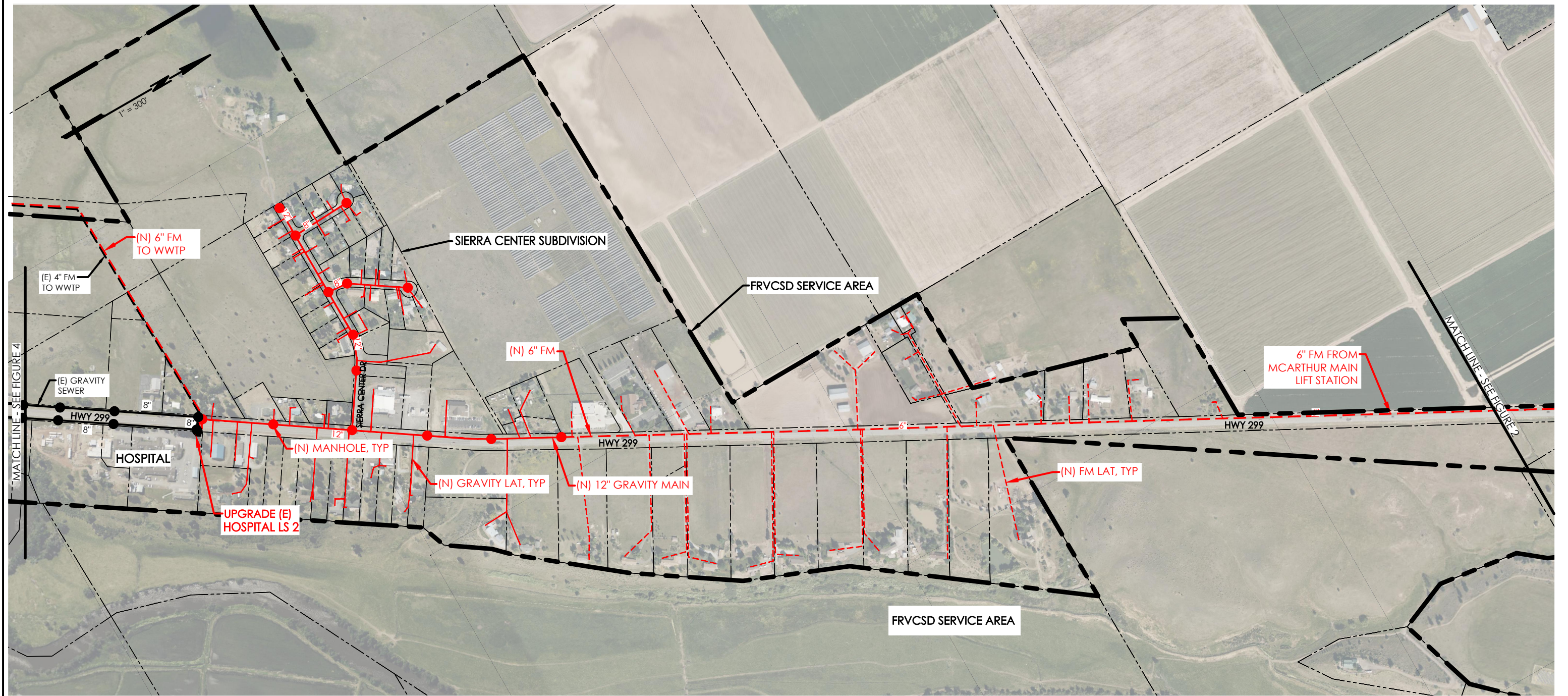


**LINE LEGEND**

	NEW GRAVITY SEWER MAIN
	NEW GRAVITY SEWER LATERAL
	NEW FORCE MAIN
	NEW FORCE MAIN LATERAL

**Figure 2**  
**McArthur Area Improvements**



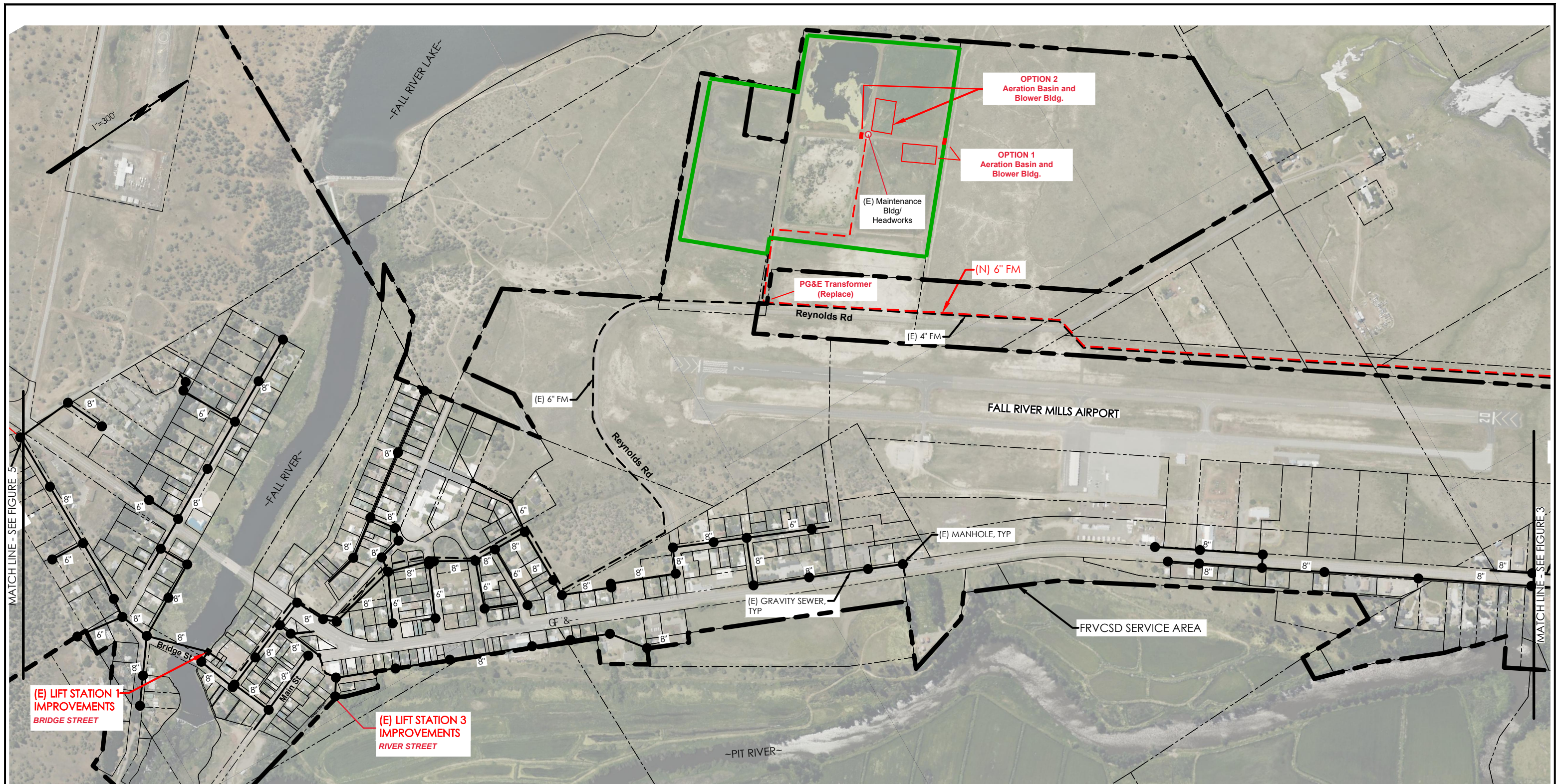


**LINE LEGEND**

<span style="color: red;">———</span>	NEW GRAVITY SEWER MAIN
<span style="color: red;">- - - - -</span>	NEW GRAVITY SEWER LATERAL
<span style="color: red;">- - - - -</span>	NEW FORCE MAIN
<span style="color: red;">- - - - -</span>	NEW FORCE MAIN LATERAL
<span style="color: black;">———</span>	EXISTING GRAVITY SEWER MAIN
<span style="color: black;">- - - - -</span>	EXISTING FORCE MAIN

**Figure 3**  
**SR 299 Corridor, Sierra Center Subdivision, and Existing Lift Station 2**



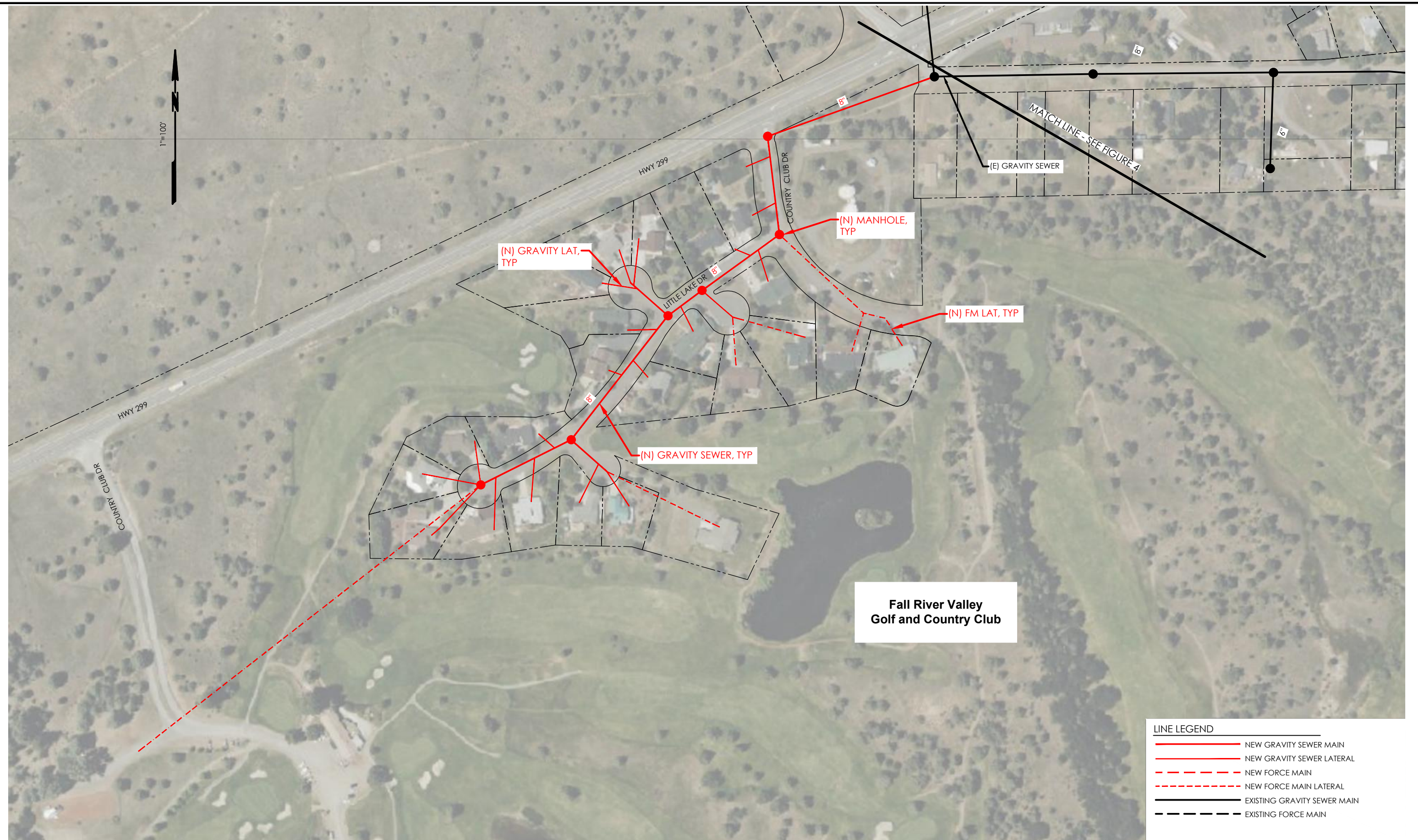


**LINE LEGEND**

<span style="color: green;">—</span>	WWTP STUDY AREA
<span style="color: red;">—</span>	NEW GRAVITY SEWER LATERAL
<span style="color: red;">- - -</span>	NEW FORCE MAIN
<span style="color: red;">- · - · -</span>	NEW FORCE MAIN LATERAL
<span style="color: black;">—</span>	EXISTING GRAVITY SEWER MAIN
<span style="color: black;">- - -</span>	EXISTING FORCE MAIN

**Figure 4**  
**Wastewater Treatment Plant and Existing Lift Stations 1 and 3**





**Figure 5**  
**Country Club Subdivision**

**Assessor's Parcel Numbers.** WWTP Site: 018-540-043, -055, -060. LS 1 (Bridge Street): portion of 032-190-033. LS 2 (Hospital): portion of 018-200-048. LS 3 (River Street): Shasta County public road ROW. Proposed Walnut Street LS: portion of 032-080-006. Proposed McArthur Main LS: portion of 018-490-052. Sewer mains and appurtenant improvements: Shasta County public road ROW and public utility easements on County-owned (airport) and privately-owned property. Sewer Laterals: numerous privately- and publicly-owned properties throughout the study area.

## 1.6 ENVIRONMENTAL SETTING

<b>General Plan Designations:</b>	<p><b>McArthur:</b> Public Facilities (PF), Urban Residential (UR), Commercial (C), and Suburban Residential (SR)</p> <p><b>SR 299 Corridor:</b> Rural Residential A (RA), Rural Residential B (RB), Agricultural Croplands (A-C), C, and Industrial (I)</p> <p><b>WWTP:</b> PF</p> <p><b>Country Club Subdivision:</b> SR</p> <p><b>LS 1 and LS 3:</b> UR; <b>LS 2:</b> RA</p>
<b>Zoning:</b>	<p><b>McArthur:</b> Public Facilities (PF), Mobile Home Park (MHP), One-Family Residential (R-1), Commercial-Light Industrial (C-M), Community Commercial (C-2), Local Convenience Center (C-1), Interim Rural Residential (IR), Unclassified (U)</p> <p><b>SR 299 Corridor:</b> IR, Rural Residential (R-R), Commercial-Light Industrial (C-M), Exclusive Agricultural (EA), C-2, PF</p> <p><b>WWTP:</b> PF</p> <p><b>Country Club Subdivision:</b> R-1</p> <p><b>LS 1:</b> R-1 with a Restrictive Flood (F-2) combining district;</p> <p><b>LS 3:</b> R-1; <b>LS 2:</b> PF</p>
<b>Surrounding Land Uses:</b>	<p>The project transects portions of the communities of Fall River Mills and McArthur; land uses in these communities are primarily low- and medium-density residential, with commercial uses situated primarily adjacent to SR 299. Properties surrounding the study area include farmland and open space. The Fall River Mills Airport is located east of the WWTP on the west side of SR 299. Properties surrounding the Country Club Subdivision include a public golf course and open space.</p>
<b>Topography:</b>	<p>Elevations in the study area range between ±3,300 feet and ±3,400 feet above sea level. The study area consists of relatively flat terrain with the overall topographical gradient sloping south/southeast toward the Fall and Pit Rivers.</p>
<b>Plant Communities/Wildlife Habitats:</b>	<p>Habitat types in and adjacent to the study area include urban, annual grassland, sagebrush, barren, stream/riverine, and open-water habitat (WWTP ponds). The primary habitat in the study area is urban and consists of paved roads and developed residential and commercial properties. Residential and commercial properties support a wide range of vegetation, including native species, introduced weeds, and ornamental/horticultural species. Annual grassland habitat is present along roadsides, in previously disturbed areas, and on some of the residential properties. Sagebrush habitat is found primarily in the WWTP property and surrounding area. Barren habitat occurs as graveled roadways and alleyways, and along some road shoulders.</p> <p>The stream/riverine habitat in the general project area includes the Pit River, Fall River, Fall River Lake, the McArthur Diversion Canal (a tributary to the Pit River), several unnamed intermittent streams, and roadside ditches. Riparian habitat occurs intermittently along the banks of the canal and some of the streams.</p>



<b>Climate:</b>	The climate of the project vicinity is of the Mediterranean type, with cold, moist winters and warm, dry summers. The average annual rainfall is ±18.15 inches. Temperatures range between an average low of 20.7 degrees Fahrenheit (°F) in January and an average high of 87.6 °F in July.
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## 1.7 TRIBAL CULTURAL RESOURCES CONSULTATION

Public Resources Code (PRC) §21084.2 (AB 52, 2014) establishes that “a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.” Pursuant to PRC §21080.3.1, in order to determine whether a project may have such an effect, a lead agency is required to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if the tribe requested to be informed through formal notification of proposed projects in the geographical area; and the tribe responds, in writing, within 30 days of receipt of the formal notification and requests the consultation. According to FRVCSD, as of October 15, 2022, no tribes have requested formal notification of proposed projects in the geographical area.

As detailed in Section 4.5, ENPLAN consulted with Native American tribes that were identified by the Native American Heritage Commission (NAHC). On December 18, 2019, comment solicitation letters were sent to the identified tribes. Follow-up e-mails and telephone calls were placed on December 31, 2019, to the tribal members that were previously identified by the NAHC. On January 29, 2020, Ginger Amoroso with the Pit River Tribe responded and stated that the tribe has a great interest in the improvements.

A follow-up telephone call to Ginger Amoroso was placed on December 12, 2022, due to revisions to the project study area. Ms. Amoroso stated that certain locations in the study area have a high potential to contain tribal cultural resources, and a Native American monitor should be present during initial earth-disturbing activities in these areas. No other comments or concerns were reported by any Native American representative or organization.

## 1.8 REGULATORY REQUIREMENTS

Permits and approvals that may be necessary for construction and operation of the proposed project are identified below.

### **Fall River Valley Community Services District:**

- Adoption of a Mitigated Negative Declaration pursuant to CEQA.
- Adoption of a Mitigation Monitoring and Reporting Program for the project that incorporates the mitigation measures identified in this Initial Study.

### **Shasta County:**

- Approval of an Encroachment Permit for work in the public road right-of-way.
- Issuance of building permits for new structures and sewer lateral plumbing connections.
- If the emergency standby generator is greater than 50 horsepower/37.3 kilowatts, a permit from the Shasta County Air Quality Management District is required.

### **California Department of Transportation:**

- Approval of encroachment permit for work in the State Route 299 road right-of-way.

### **U.S. Army Corp of Engineers**

- Section 404 permit if the project will impact wetlands or other waters of the U.S.

**State Water Resources Control Board (SWRCB)/Central Valley Regional Water Quality Control Board (CVRWQCB):**

- Section 401 Water Quality Certification and/or Report of Waste Discharge (or waiver) if the project will impact wetlands or waters of the U.S. and/or State (see discussion in Section 4.4).
- The FRVCSD WWTP currently operates under CVRWQCB Water Quality Order 2014-0153-DWQ-R5177 (*General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems*). This General Order applies to wastewater treatment systems that have a monthly average flow rate of 100,000 gallons per day (GPD) or less and that discharge to land. If the proposed project results in an average flow rate of more than 100,000 GPD, the FRVCSD may be required to obtain coverage under an individual permit.
- Coverage under the National Pollutant Discharge Elimination System (NPDES) permit for *Discharges of Storm Water Runoff Associated with Construction Activity* (currently Order No. 2022-0057-DWQ, adopted September 8, 2022). Permit coverage may be obtained by submitting a Notice of Intent (NOI) to the SWRCB. The permitting process requires the development and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) to reduce pollutants and any additional controls necessary to meet water quality standards.
- If construction dewatering activities result in the direct discharge of relatively pollutant-free wastewater to waters of the U.S., coverage under CVRWQCB General Order R5-2022-0006 (NPDES NO. CAG995002) *Waste Discharge Requirements - Limited Threat Discharges to Surface Water*. This Order includes specific requirements for monitoring, reporting, and implementing BMPs for construction dewatering activities.
- If construction dewatering activities result in the discharge to land of waste with a low threat to water quality (e.g., small/temporary dewatering projects) that could affect the quality of the waters of the State, coverage under SWRCB Statewide General Order 2003-003-DWQ, *Statewide General Waste Discharge Requirements (DWRs) for Discharges to Land with a Low Threat to Water Quality*. Note: The CVRWQCB may determine that construction dewatering discharges be regulated under other WDRs or a conditional waiver, such as Resolution R5-2018-085, *Waiver of Reports of Waste Discharge and WDRs for Specific Types of Discharge within the Central Valley Region*.

**California Department Fish and Wildlife:**

- Issuance of a Section 1600 Lake or Streambed Alteration Agreement if the project will obstruct the natural flow of any river, stream, or lake; change the bed, channel, or bank of any river, stream, or lake; use material from any river, stream, or lake; and/or deposit or dispose of material into any river, stream, or lake.

**California Office of Historic Preservation, State Historic Preservation Officer (SHPO)**

- Due to federal funding for the project, consultation regarding potential impacts to cultural resources is required pursuant to Section 106 of the National Historic Preservation Act (NHPA).

## 1.9 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the proposed project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages. Impacts to these resources are evaluated using the checklist included in Section 4.0. The proposed project was determined to have a less-than-significant impact or no impact without mitigation on unchecked resource areas.

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

## 1.10 PROPOSED MITIGATION MEASURES

The following mitigation measures are proposed to reduce impacts of the proposed project to less than significant levels.

### AIR QUALITY

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#### MM 4.3.1 The following measures shall be implemented throughout construction:

- a. All material excavated, stockpiled, or graded shall be covered or sufficiently watered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of ambient air quality standards. Watering shall occur at least twice daily with complete site coverage, preferably in the mid-morning and after work is completed each day.
- b. All material transported offsite shall be either sufficiently watered or securely covered to prevent a public nuisance.
- c. All areas (other than paved roads) with vehicle traffic shall be watered periodically or have dust palliatives applied for stabilization of dust emissions.
- d. All on-site vehicles shall be limited to a speed of 15 miles per hour on unpaved roads.
- e. All land clearing, grading, earth moving, and excavation activities on the project site shall be suspended when winds are causing excessive dust generation.
- f. All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least two feet of free board in accordance with the requirements of Section 23114 of the California Vehicle Code.
- g. Paved streets in and adjacent to the construction site shall be swept or washed at the end of the day (or more frequently if needed) to remove excessive accumulations of silt and/or mud resulting from activities on the development site.
- h. When not in use, motorized construction equipment shall not be left idling for more than five minutes.
- i. All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications.



**MM 4.3.2 The following measures shall be implemented to minimize NO<sub>x</sub> emissions during construction:**

- a. Prior to commencement of construction activities, the contractor shall provide evidence to the Fall River Valley Community Services District (FRVCSD) that all diesel-fueled construction equipment including but not limited to rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors, meets or exceeds California Air Resources Board (CARB) Tier 4 final off-road emissions standards. If more stringent requirements are in place at the time of construction, the most stringent requirements shall apply.

An exemption from these requirements may be granted by the FRVCSD in the event that the contractor provides documentation that Tier 4 Final equipment is not reasonably available and that corresponding reductions in NO<sub>x</sub> emissions would be achieved from other construction equipment.

- b. Alternatively-fueled construction equipment shall be used, where feasible (e.g., compressed natural gas (CNG), liquefied natural gas (LNG), propane, biodiesel, or advanced technologies that do not rely on diesel fuel).

## **BIOLOGICAL**

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- MM 4.4.1** In conjunction with preparation of improvement plans for the project, the project engineer shall identify all improvements that would occur outside of the area that was surveyed for special-status plants, special-status animals, and wetlands and waters of the U.S. and State (refer to Appendix C, Survey Coverage Maps, of the Initial Study).

All areas within the project footprint that were not previously surveyed shall be surveyed by a qualified biologist. The biologist shall consult with the U.S. Army Corps of Engineers, Central Valley Regional Water Quality Control Board, California Department of Fish and Wildlife, and other applicable agencies to determine required resource agency permits and permit conditions. Any mitigation requirements shall be satisfied prior to commencement of earth-disturbing activities or as otherwise specified in applicable resource agency permits.

- MM 4.4.2** If western pond turtles are observed in the work area, a qualified biologist shall be contacted and construction activities shall be halted within 25 feet of the turtle until the turtle is confirmed to have left the project area or is relocated by a qualified biologist.

- MM 4.4.3** In order to avoid impacts to nesting birds and raptors protected under the federal Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5, including their nests and eggs, one of the following shall be implemented:

- a. Vegetation removal and other ground-disturbance activities associated with construction shall occur between September 1 and January 31 when birds are not nesting; or
- b. If vegetation removal or ground disturbance activities occur during the nesting season (February 1 – August 31), a pre-construction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area.

Surveys shall begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The survey shall take into account acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds. At a minimum, the survey report shall include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed in the area, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.).

The results of the survey shall be submitted electronically to the California Department of Fish and Wildlife at [R1CEQARedding@wildlife.ca.gov](mailto:R1CEQARedding@wildlife.ca.gov) upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

If active nests are found, appropriate actions shall be implemented to ensure compliance with the Migratory Bird Treaty Act and California Fish and Game Code. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

- MM 4.4.4** The potential for introduction and spread of noxious weeds shall be avoided/minimized by:
- a. Using only certified weed-free erosion control materials, mulch, and seed;
  - b. Limiting any import or export of fill material to material that is known to be weed free; and
  - c. Requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering the job site and upon leaving the job site.
- MM 4.4.5** High-visibility fencing, flagging, or other markers shall be installed along the outer edge of the construction zone adjacent to wetlands and other waters designated for avoidance. The fencing location shall be determined by a qualified biologist in consultation with the project engineer and the Fall River Valley Community Services District. No construction activities (e.g., clearing, grading, trenching, etc.), including vehicle parking and materials stockpiling, shall occur within the fenced area. The exclusionary fencing shall be periodically inspected during construction activities to ensure that the fencing is properly maintained. The fencing shall be removed upon completion of work.
- MM 4.4.6** To prevent the inadvertent entrapment of wildlife, the construction contractor shall ensure that at the end of each workday trenches and other excavations that are over one-foot deep have been backfilled or covered with plywood or other hard material. If backfilling or covering is not feasible, one or more wildlife escape ramps constructed of earth fill or wooden planks shall be installed in the open trench. Pipes shall be inspected for wildlife prior to capping, moving, or placing backfill over the pipes to ensure that animals have not been trapped. If animals have been trapped, they shall be allowed to leave the area unharmed.

## **CULTURAL**

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- MM 4.5.1** In conjunction with preparation of improvement plans for the project, the project engineer shall identify all improvements that would occur outside of the area that was surveyed for archaeological and historical resources (refer to Appendix C, Survey Coverage Maps, of the Initial Study).

All areas within the project footprint that were not previously surveyed by a qualified archaeologist shall be surveyed to identify potentially significant archaeological and historical resources. If the archaeologist determines that no such resources are present, no further action is required. If such resources are present, additional evaluation shall be completed by a qualified archaeologist in accordance with the significance criteria set forth in the National Historic Preservation Act and the California Register for Historical Resources. Appropriate mitigation measures recommended by the archaeologist shall be implemented. Potential measures may include avoidance of the resource, site capping (burial), recordation of conservation easements, and/or data recovery.

- MM 4.5.2** In the event of any inadvertent discovery of cultural resources (i.e., burnt animal bone, midden soils, projectile points or other humanly modified lithics, historic artifacts, etc.), all work within 50 feet of the find shall be halted until a professional archaeologist can evaluate the significance of the find in accordance with PRC §21083.2(g) and §21084.1, and CEQA Guidelines §15064.5(a). If any find is determined to be significant by the archaeologist, the Fall River Valley Community Services District (CSD) shall meet with the archaeologist to determine the appropriate course of action. If necessary, a Treatment Plan prepared by an archeologist outlining recovery of the resource, analysis, and reporting of the find shall be prepared. The Treatment Plan shall be reviewed and approved by the Fall River Valley CSD prior to resuming construction.
- MM 4.5.3** A minimum of two weeks in advance of any ground-disturbing activities (e.g., clearing, grading, trenching, etc.), the Tribal Historic Preservation Officer of the Pit River Tribe shall be notified and offered the opportunity for a Native American representative to monitor ground-disturbing activities.
- MM 4.5.4** In the event that cultural resources or human remains of Native American descent are identified during earth disturbance, the Pit River Tribe shall be requested to provide a Native American monitor to observe subsequent earth-disturbing construction activities on potentially sensitive lands.
- MM 4.5.5** In the event that human remains are encountered during construction activities, the Fall River Valley CSD shall comply with §15064.5 (e) (1) of the CEQA Guidelines and PRC §7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the County coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the NAHC to identify the most likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed in §15064.5 (e) has been completed.

## **GEOLOGY AND SOILS**

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- MM 4.7.1** If paleontological resources (fossils) are discovered during construction, all work within a 50-foot radius of the find shall be halted until a professional paleontologist can evaluate the significance of the find. If any find is determined to be significant by the paleontologist, Fall River Valley Community Services District (FRVCSD) representatives shall meet with the paleontologist to determine the appropriate course of action. If necessary, a Treatment Plan prepared by a paleontologist outlining recovery of the resource, analysis, and reporting of the find shall be prepared. The Treatment Plan shall be reviewed and approved by FRVCSD prior to resuming construction.

## **NOISE**

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- MM 4.13.1** Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to between the daytime hours of 7:00 A.M. and 7:00 P.M., Monday through Saturday. Construction activities shall be prohibited on Sundays and federal/state recognized holidays. Exceptions to these limitations may be approved by the Fall River Valley CSD General Manager or his/her designee for activities that require interruption of utility services to allow work during low demand periods, or to alleviate traffic congestion and safety hazards.
- MM 4.13.2** Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.
- MM 4.13.3** Stationary construction equipment (generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses.

**MM 4.13.4** Sewer lift stations, emergency standby generators, the aeration system and associated equipment at the WWTP, building mechanical equipment, and other noise-generating stationary sources shall be designed to ensure that operational noise levels at nearby sensitive receptors do not exceed applicable Shasta County noise standards.

Noise attenuation may include, but not be limited to, installing equipment in an enclosure that provides adequate noise attenuation, selecting low noise-generating equipment, and use of sound-rated doors, windows, and vents.

## **TRIBAL CULTURAL RESOURCES**

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Implementation of **MM 4.5.3** and **MM 4.5.4**.

## SECTION 2.0 CEQA DETERMINATION

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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 has been 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 significant effect(s) 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, if the effect is a “potentially significant impact” or “potentially significant unless mitigated.” 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.

  
\_\_\_\_\_  
Cecil Ray  
District Manager

7 March 2023  
Date



## SECTION 3.0 PROJECT DESCRIPTION

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### 3.1 PROJECT BACKGROUND, NEED, AND OBJECTIVES

#### ***Background***

The Fall River Valley Community Services District (FRVCSD) was formed in 1961 to provide water to the residents of Fall River Mills. FRVCSD also provides wastewater collection and treatment and parks/recreational services within its service area boundary, which encompasses  $\pm 1,350$  acres ( $\pm 2$  square miles).

The wastewater collection and treatment system was constructed in 1980 to serve the residents of Fall River Mills and some businesses east of the town. The FRVCSD's current service area boundary encompasses 1,350 acres and includes the communities of Fall River Mills and McArthur and areas along SR 299 between the two communities. Public sewer services are not currently provided to the McArthur area, to properties along the SR 299 corridor between McArthur and Fall River Mills, or to the Country Club Estates Subdivision; developed properties in these areas are served by private septic systems.

The Intermountain Fairgrounds property in McArthur includes a wastewater collection and treatment system that was built in 1994 to serve a neighboring 60-unit RV park. This system also currently serves restrooms on the Fairgrounds property. The facility, owned by Shasta County, consists of a lift station and two treatment lagoons, each with an area of  $\pm 0.13$  acres.

#### ***Current Wastewater System***

The existing wastewater system consists of  $\pm 6,000$  linear feet of 4- and 6-inch-diameter pressurized force mains,  $\pm 25,000$  linear feet of 6- and 8-inch-diameter gravity-fed sewage collection mains, and three lift stations. Effluent is pumped through pressurized force mains from the lift stations to the wastewater treatment plant (WWTP) treatment ponds.

The WWTP consists of six five-acre clay-lined oxidation/evaporation ponds that treat the community's effluent. In 2010, two of the southern ponds were relocated in conjunction with the runway expansion at the Fall River Mills Airport.

All wastewater is confined to the ponds, and there is no treated effluent discharge. The primary disposal mechanism is evaporation with a likely small percolation component. There is currently no aeration process at the WWTP. To control odors, the facility has a sodium hypochlorite (bleach) injection system. There is a small building on the WWTP property that houses sodium hypochlorite equipment, flow measurement and recording equipment, and drums of sodium hypochlorite for odor control if required.

There is an existing buried concrete headworks with Parshall Flume flow-measuring devices and screens located immediately south of the existing maintenance building, which is located in the center dike between four of the ponds (see **Figure 4**).

#### ***Current and Projected Wastewater Connections and Flows***

According to the FRVCSD Wastewater Facilities Master Plan (WWMP) update prepared in May 2020 by Forsgren Associates, there were a total of 283 sewer connections in the FRVCSD service area in 2020. This included 264 residential, 14 commercial, one school (Fall River Elementary School), one hospital (Mayers Memorial Hospital), and three hotels.

As detailed in the WWMP, in order to accurately estimate wastewater flows, each sewer connection was assigned an Equivalent Residential Unit (ERU) factor based on type of use. **Table 3.1-1** identifies sewer connections and ERUs in the Fall River Mills service area as of 2020, and additional connections that would occur with the proposed expansion of the FRVCSD sewer system. **Table 3.1-1** also identifies current (2020) average day wastewater flows and peak flows based on an average of 250 gallons per day (GPD) per ERU and a peak flow factor of 2.5.

**Table 3.1-1  
Existing and Additional Wastewater Connections, Equivalent Residential Units (ERU), and Flows**

Land Use	Current (2020)			Additional Connections*		
	Connections	ERUs/ Connection	ERUs	Connections	ERUs/ Connection	ERUs
Residential	264	1	264	296	1	296
Commercial	14	2	28	34	2	68
Schools	1	13	13	1	17	17
Hospitals	1	60	60	0	0	0
Hotels	3	7	21	0	0	0
<b>Total</b>	283	-	386	331	-	381
<b>Average Day Flow</b>	96,500 GPD			95,250 GPD		
<b>Peak Flow</b>	241,250 GPD			238,125 GPD		

\*Based on currently developed parcels; does not include potential future development.

Although flows to the WWTP could nearly double with implementation of the project, typically only two of the six ponds receive wastewater, with the northeastern pond receiving effluent only during extremely wet years; therefore, there would be no need to expand the existing ponds to accommodate the increased flows.

**Need and Objectives**

Sewer System Expansion. On-site septic systems are susceptible to failure, especially if the septic system is older, improperly designed, improperly constructed, and/or not properly maintained. Failing septic systems may result in wastewater backing up into plumbing fixtures in homes and businesses, wastewater discharging to the ground surface, or wastewater or effluent discharging into and contaminating surface water and/or groundwater. The proposed wastewater expansion project would eliminate potential public health and environmental risks associated with failing septic systems.

Existing Collection System. According to the 2020 Wastewater Master Plan update, the existing collection system piping within Fall River Mills was installed in 1980 and includes more modern materials, primarily polyvinyl chloride (PVC) pipe and limited amounts of ductile iron pipe. The Master Plan does not identify any needed improvements to the existing sewer pipes; however, in order to accommodate the additional flows from McArthur, the 4-inch-diameter force main between LS 2 (Hospital LS) and the WWTP needs to be replaced with a 6-inch-diameter force main.

Existing Lift Stations. The existing lift stations are almost 40 years old and have reached or are nearing their useful service lives. In addition, none of the existing lift stations has back-up level controls or SCADA, and existing electrical components have been patched together throughout the years.

WWTP. The WWTP utilizes a sodium hypochlorite injection system at the lagoons to treat wastewater; however, this system is not always effective at controlling odors, and the odors often affect the community of Fall River Mills. The 2020 WWMP recommends employing aeration at the WWTP to control these odors, as well as replacing equipment at the WWTP in order to reduce the trash load flowing into the lagoons and to provide a more reliable flow measurement system.

The purpose of the proposed project is to extend sewer service to McArthur and other areas currently served by private septic systems, replace aging infrastructure, protect surface water and groundwater quality, improve the treatment process, and provide reliable sewer service in the

FRVCSD's service area. A detailed description of the improvements is provided in Section 3.2 (Project Components/Physical Improvements).

## 3.2 PROJECT COMPONENTS / PHYSICAL IMPROVEMENTS

This section describes the proposed improvements that are the subject of this Initial Study. The project includes the following components:

### **McArthur Area Collection System (Figure 2)**

- 6-, 8-, and 12-inch-diameter gravity sewer mains would be installed throughout the McArthur area and would convey flows to a new community lift station (LS) that would be installed on the south side of McArthur Road, west of Oak Street (McArthur Main LS).
- The McArthur Main LS would consist of a 6-foot-diameter precast concrete manhole with stainless steel guide rails and epoxy-coated welded steel discharge piping. Pumps would be submersible non-clog and would be capable of being installed/removed with the guiderail system from the top of the wet well. Electrical, controls, and SCADA equipment would be installed in a ±150-square-foot concrete masonry unit (CMU) building with a metal roof. An antenna for the SCADA system would be mounted on the roof of the new building. An emergency standby generator with an automatic transfer switch (ATS) would be installed inside a sound-attenuated, insulated enclosure adjacent to the McArthur Main LS.
- A 6-inch-diameter force main would be installed to convey wastewater from the McArthur Main LS to SR 299 and then south in SR 299 to a new gravity sewer manhole ±1,200 feet northeast of Sierra Center Drive (also refer to **Figure 3**).
- A small package LS would be installed at the end of Walnut Street (Walnut LS) to serve ±8 homes. Electrical, controls, and SCADA equipment would be installed in a ±150-square-foot CMU building with a metal roof. An antenna for the SCADA system would be mounted on the roof of the new building. The antenna would consist of a 1 ½- to 2-inch diameter steel pole, ±10 feet in height, with the antenna mounted on top of the pole. An emergency standby generator with an ATS would be installed on-site inside a sound-attenuated insulated enclosure.
- A short segment of force main would extend from the Walnut LS and would discharge into a manhole in Oak Street.
- 4- and 6-inch-diameter laterals would be installed from the sewer mains to existing structures.
- A two-way cleanout would be installed at the property line for each connection.
- ±50 manholes would be installed along the gravity sewer main.
- The existing wastewater treatment facility at the Intermountain Fairgrounds would be abandoned and the new collection system would be extended to serve the Fairgrounds.
- Existing septic tanks would be abandoned in accordance with Shasta County requirements; abandoning the tanks would consist of removing the top, pumping the contents, filling the tank with approved backfill material, and restoring the surface to pre-project conditions.

### **SR 299 Corridor, Sierra Center Subdivision Collection System, and LS 2 (Figure 3)**

- In addition to the 6-inch-diameter force main that would be installed in SR 299 from the new McArthur Main LS (also refer to **Figure 2**), a new 12-inch-diameter gravity sewer main would extend from the southern terminus of the force main to LS 2 (Hospital) (see **Photo 1**).
- The existing 4-inch-diameter force main between LS 2 and the WWTP would be replaced with a 6-inch-diameter force main in the same location (also refer to **Figure 4**).

- LS 2 would be upgraded by replacing existing pumps, motors, electrical, controls, and piping with higher capacity equipment. A pole-mounted electrical panel and antenna for the SCADA system would be installed adjacent to LS 2. The height of the antenna would depend on the results of a radio path survey, but it is expected that the pole would be similar in height to existing utility poles in the area.
- 8- and 12-inch-diameter gravity sewer mains would be installed to serve properties in the Sierra Center Subdivision.
- 4- and 6-inch-diameter laterals would be installed from the sewer mains to existing structures.
- A two-way cleanout would be installed at the property line for each connection.
- ±14 manholes would be installed along the gravity sewer main.
- Properties along SR 299 that front the 6-inch-diameter force main would connect to the force main by installing a new septic tank effluent pump (STEP) system inside the existing septic tank and installing a small-diameter force main from the septic tank to the 6-inch-diameter force main in SR 299.



**Photo 1. Lift Station 2 (Hospital)**

#### **Existing Lift Stations 1 and 3 (Figure 4)**

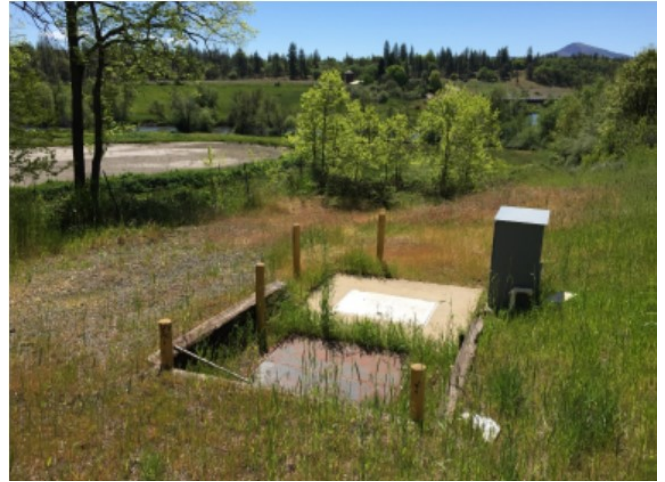
Existing pumps, motors, electrical, controls, and piping would be replaced at LS 1 (see **Photo 2**) and LS 3 (see **Photo 3**). The concrete wet well liners at both LS 1 and LS 3 would be coated with a cementitious epoxy to prolong their service lives. Back-up level controls and SCADA equipment would be installed at both LS 1 and LS 3.

For LS 1 (Bridge Street), SCADA controls and equipment would be installed inside the existing building. For LS 3 (River Street), SCADA controls and equipment would be installed in a new ±150-square-foot CMU building. An antenna for the SCADA systems would be mounted on the roof of each building. The antenna would consist of a 1 ½- to 2-inch diameter steel pole, ±10 feet in height, with the antenna mounted on top of the pole.

If the results of a radio path survey indicate that a roof-mounted antenna is not feasible due to interference, it may be determined that the antenna needs to be installed on a ground-mounted pole adjacent to one or both of the lift stations.



**Photo 2. Lift Station 1 (Bridge Street)**



**Photo 3. Lift Station 3 (River Street)**

#### **WWTP Improvements (Figure 4)**

To accommodate the additional wastewater flows that would be generated by the project, a new earthen pond would be constructed inside the footprint of one of the existing ponds to facilitate more concentrated treatment with diffused aeration. Depending on the outcome of additional engineering studies, the new aeration basin would be constructed in one of the two ponds shown in **Figure 4**.

Construction of the new aeration basin would include installation of a new berm in the existing pond. Fill to create the new berm would be from the berm wall or clay liner of one of the existing ponds.

The new pond would be deeper than the existing (surrounding) pond and would hold more water with less exposed water surface area. **Photo 4** shows one of the ponds on the WWTP property.



**Photo 4. Wastewater Treatment Plant Pond**



One of the following two aeration techniques would be added to the new pond.

**Static Tube Aeration:** Small-diameter low-pressure air pipes would be installed along the bottom of the pond with strategically placed orifices to allow air into the pond. Above each orifice would be a static tube, which is an open pipe section with a series of baffles that “chop” air bubbles into smaller bubbles. This aeration option is common in colder climates where surface aerators are subject to freezing.

**Titus® Twister® Mixing Aerator System:** This aeration option would incorporate traditional floating aerator technology into a deep mixing/aeration process. The Titus® Twister® aerators have been successfully used in earthen ponds in cold and extremely cold climates.

A new ±600-square-foot CMU building with a metal roof would be constructed adjacent to the aeration basin to house controls, instrumentation, and equipment for the new aeration system (see **Figure 4**). It is anticipated that the aeration equipment would consist of two to three 40- to 50-horsepower (HP) positive-displacement blowers, an electric heat pump for air conditioning, and mechanical equipment for ventilation with outside air.

In addition, improvements to the influent screening process and to flow metering equipment would be completed. A new self-cleaning mechanical screen would be installed within the existing concrete headworks structure. Existing electronic sensors in the headworks would be replaced and would tie in to the SCADA system.

Adding aeration to the WWTP would require extending higher capacity electrical service to the WWTP. To accomplish this, an existing PG&E transformer located on Reynolds Road at the WWTP driveway would be replaced, and new underground conduit and conductors would be installed from the transformer to the new blower building.

#### **Country Club Subdivision Collection System (Figure 5)**

- 8-inch-diameter gravity sewer mains would be installed.
- 4- and 6-inch-diameter laterals would be installed from the sewer mains to existing structures.
- A two-way cleanout would be installed at the property line for each connection.
- ±6 manholes would be installed along the gravity sewer main.

#### **Construction Methods and Considerations**

The majority of the improvements would occur in the paved road ROW and graveled road shoulders, and in existing graveled alleyways in previously disturbed areas. Sewer laterals would be installed on private property, both in paved/graveled driveways and in lawn areas. The force main between LS 2 (Hospital) and the WWTP would be installed in overland areas on county owned property (airport) and privately owned property.

Pipeline improvements would be installed using open-cut trenching. At culvert crossings, the pipe would be installed in the fill overlying the culvert. The maximum depth of excavation would be six feet. In paved areas, the existing pavement would be saw-cut and removed. Following installation of the pipe, the trench would be backfilled, and the pavement would be replaced. In unpaved areas, the excavation would be backfilled with select native soils; aggregate base would be replaced or the surface would be revegetated as necessary.

Access to the work areas would be from paved public roads and private driveways. Temporary staging of construction equipment and materials would occur at the WWTP and in the affected road ROW throughout the project area.

Work is anticipated to commence in the summer of 2024 and would be completed in approximately 24 months; however, proposed improvements may be phased based on the availability of funding and/or supply chain issues.

## SECTION 4.0 ENVIRONMENTAL IMPACT ANALYSIS

### 4.1 AESTHETICS

Except as provided in Public Resources Code §21099 (Transit-Oriented Infill Projects), would the project:

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

### REGULATORY CONTEXT

There are no federal or local regulations pertaining to aesthetics that apply to the proposed project.

#### STATE

##### California Building Standards Code

The California Building Standards Code (CBSC) (CCR Title 24) is based on the International Building Code used widely throughout the country. Part 11 of the CBSC is the Green Building Code (CALGreen). CALGreen §5.106.8 includes mandatory light pollution reduction measures for non-residential uses. The intent of the measures is to maintain dark skies and to ensure that newly constructed projects reduce the amount of backlight, uplight, and glare (BUG). In addition, §130.2(c) of the California Energy Code (CEC) (CBSC Part 6) requires that all outdoor lighting for new non-residential uses must be controlled with a photocontrol, astronomical time-switch control, or other control capable of automatically shutting off the outdoor lighting when daylight is available, thereby minimizing the potential for glare during the daytime. In addition, automatic scheduling controls must be installed for all outdoor lighting and must be capable of reducing lighting power by at least 50 percent and no more than 90 percent, and must be separately capable of turning the lighting off during scheduled unoccupied periods.

##### California Scenic Highway Program

The California Scenic Highway Program, administered by the California Department of Transportation (Caltrans), was established in 1963 to preserve and protect the natural beauty of scenic highway corridors in the State. The Scenic Highway System includes a list of highways that have been designated as scenic highways as well as a list of highways that are eligible for designation as scenic highways. Local jurisdictions can nominate scenic highways for official designation by identifying and defining the scenic corridor of the highway and adopting a Corridor Protection Program that includes measures that strictly limit development and control outdoor advertising along the scenic corridor.

## DISCUSSION OF IMPACTS

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### Questions A and C

Scenic vistas are defined as expansive views of highly valued landscapes from publicly accessible viewpoints. Scenic vistas include views of natural features such as mountains, hills, valleys, water courses, outcrops, and natural vegetation, as well as man-made scenic structures. Scenic resources in the study area include the Fall River, Pit River, trees and other vegetation, open space, farmland, and mountains surrounding the communities, including Mt. Lassen, Mt. Shasta, Burney Mountain, and Soldier Mountain. The project area is visible to individuals living and working in the area and to travelers on adjacent roadways, including SR 299.

The proposed project would have short-term visual impacts during construction due to clearing, trenching, and staging of construction equipment and materials. Staging would occur on the WWTP property, the LS 1 (Bridge Street) property, and in the affected road ROW throughout the project area. Paved roads that are disturbed during installation of the pipelines would be re-paved following construction. In unpaved areas, vegetation may be removed or trimmed up to accommodate the improvements; however, it is not anticipated that any mature trees will need to be removed. Disturbed areas would be revegetated as appropriate upon completion of construction.

Project components that have a potential to affect the existing visual character of the area include the new CMU buildings at the McArthur Main and Walnut lift stations in McArthur, and an antenna mounted on the roof of each of these lift stations. In addition to residences and commercial structures, other features in the built environment in the McArthur study area include public utility cabinets, overhead utility lines, light poles, and street signage.

In the Fall River Mills area, components that have a potential to result in visual impacts include the new CMU building adjacent to LS 3 (River Street), and antennas for the SCADA system at LS 1, LS 2 (Hospital), and LS 3. At LS 1 and LS 3, an antenna for the SCADA systems would be mounted on the roof of each building. The antenna would consist of a 1 ½- to 2-inch diameter steel pole, ±10 feet in height, with the antenna mounted on top of the pole. If the results of a radio path survey indicate that a roof-mounted antenna is not feasible due to interference, the antenna may need to be installed on a ground-mounted pole adjacent to one or both of the lift stations. At LS 2, a new electric panel would be mounted on two ground-mounted poles, and an antenna would be installed on a new pole adjacent to the LS. In addition to residences and commercial structures, other features in the built environment surrounding LS 1, LS 2, and LS 3 include overhead utility lines and light poles. The proposed antennas at the lift stations are similar to other pole-mounted facilities in the study area and would not significantly change the visual character of the area.

Depending on final design, the new blower building at the WWTP would be located as close as ±0.20 miles from Reynolds Road and ±0.15 miles from public walking trails adjacent to Fall River Lake. Due to these distances, the new blower building would not be a prominently visible feature in the viewshed. The new PG&E transformer would be located adjacent to Reynolds Road near the driveway to the WWTP. The transformer would replace an existing transformer and would not result in a significant visual change in the area.

Therefore, because the proposed improvements are consistent with existing features in the built environment, and proposed improvements at the WWTP would not be prominently visible from public viewpoints, the project would not have an adverse effect on a scenic vista and would not degrade the existing visual character or quality of public views of the site and its surroundings. Impacts would be ***less than significant***.

### Question B

According to Caltrans, the segment of SR 299 that runs through the project area is eligible for designation as a State Scenic Highway (Caltrans, 2022). However, there are currently no officially designated State Scenic Highways within a 50-mile radius of the project area. Therefore, the proposed project would have ***no impact*** on scenic resources within a designated State Scenic Highway.

## Question D

The proposed project would include installation of security lighting at the new lift stations and the blower building at the WWTP. New permanent lighting would be required to comply with CALGreen light pollution reduction measures for non-residential uses as described under Regulatory Context. The intent of the measures is to maintain dark skies and to ensure that newly constructed projects reduce the amount of backlight, uplight, and glare (BUG).

It is not anticipated that temporary lighting during construction would be needed because the majority of work would occur during times of the year with extended daylight. Further, as discussed in Section 4.13 (Noise), work is limited to between the hours of 7:00 AM and 7:00 PM.

As further discussed in Section 4.9 (Hazards and Hazardous Materials) under Question F, if work occurs in the public road ROW, a traffic control plan must be prepared in accordance with the procedures, methods, and guidance given in the current edition of the California Manual on Uniform Traffic Control Devices (MUTCD) (Caltrans, 2021). The MUTCD addresses the use of temporary lighting and requires that construction work lighting not create glare that could interfere with the vision of oncoming motorists (e.g., by installing screens, mounting lamps below the top edge of a barrier wall, adjusting the beam angle, etc.).

Compliance with existing requirements ensures that impacts associated with light and glare would be **less than significant** and the proposed project would not adversely affect day or nighttime views in the area.

## CUMULATIVE IMPACTS

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Potential cumulative projects in the area include growth according to the build-out projections in the Shasta County General Plan. As documented above, the proposed project does not include any features that would result in a significant permanent change to the visual character of the area. New light sources at the new lift stations and the WWTP blower building would be confined to the premises and would not result in traffic hazards due to excessive light and glare. Therefore, the project's aesthetic impacts would not be cumulatively considerable.

## MITIGATION

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None necessary.

## DOCUMENTATION

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**California Department of Transportation (Caltrans).** 2022. California Road System – Functional Classification. <https://www.arcgis.com/apps/webappviewer/index.html?id=026e830c914c495797c969a3e5668538>. Accessed October 2022.

\_\_\_\_\_. 2021. California Manual on Uniform Traffic Control Devices. <https://dot.ca.gov/programs/safety-programs/camutcd/camutcd-files>. Accessed April 2022.

## 4.2 AGRICULTURE AND FOREST RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code §51104(g)) or result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY CONTEXT

There are no federal regulations pertaining to agriculture or forest resources that apply to the proposed project.

#### STATE

##### California Farmland Mapping and Monitoring Program (FMMP)

The FMMP was established in 1982 to provide data to decision makers to assist them in making informed decisions for the best utilization of California's farmland. Under the FMMP, the Department of Conservation (DOC) is responsible for mapping, monitoring, and reporting on the conversion of the State's farmland to and from agricultural use. Important Farmland Maps are updated and released every two years. The following mapping categories, which are determined based on soil qualities and current land use information, are included in the FMMP: prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, grazing land, urban and built-up land, other land, and water.

##### Williamson Act

The Williamson Act (California Land Conservation Act of 1965) was enacted as a means to protect agricultural uses in the State. Under the Williamson Act, local governments can enter into contracts with private landowners to ensure that specific parcels are restricted to agricultural and related open space uses. In return, landowners receive reduced property tax assessments. The minimum term for a Williamson Act contract is ten years, and the contract is automatically renewed for one-year terms unless the landowner files a notice of nonrenewal or a petition for cancellation.

##### Forest Land and Timberland

PRC §12220(g) defines Forest Land as *“land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other*



public benefits.” PRC §4526 defines timberland as “land, other than land owned by the federal government, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees.” Government Code §51104(g) defines Timberland Production Zone as “an area which has been zoned pursuant to [Government Code] §51112 or §51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h).”

**LOCAL**

**Shasta County**

The Shasta County General Plan includes the following Objective and Policy that apply to the proposed project:

<b>Chapter 6.1, Agricultural Lands</b>		
<b>Objective:</b>	AG-5	Protection of agricultural lands from development pressures and or uses which will adversely impact or hinder existing or future agricultural operations.
<b>Policy:</b>	AG-h	The site planning, design, and construction of on-site and off-site improvements for nonagricultural development in agricultural areas shall avoid unmitigable short- and long-term adverse impacts on facilities, such as irrigation ditches, used to supply water to agricultural operations.

**DISCUSSION OF IMPACTS**

**Questions A, B, and D**

According to the *Important Farmland in California* map, the eastern portions of Shasta County were not surveyed for inclusion in the FMMP. Section 21060.1(b) of the California Environmental Quality Act states “In those areas of the state where lands have not been surveyed... ‘agricultural land’ means land that meets the requirements of “prime agricultural land” as defined in paragraph (1), (2), (3), or (4) of subdivision (c) of Section 51201 of the Government Code.” “Prime agricultural land” means any of the following:

- (1) All land that qualifies for rating as class I or class II in the Natural Resource Conservation Service land use capability classifications.
- (2) Land which qualifies for rating 80 through 100 in the Storie Index Rating.
- (3) Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per month (AUM) as defined by the United States Department of Agriculture.
- (4) Land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars (\$200) per acre.

The LCC indicates the suitability of soils for most kinds of crops. Soils are rated from Class I to Class VIII, with soils having the fewest limitations receiving the highest rating (Class I). The LCC also includes capability subclasses, which are soil groups that identify soil limitations that interfere with plant growth or cultivation. The subclasses are designated by the letters e (erosion), w (water), s (rooting zone issues), or c (very cold or very dry climate). The Storie Index provides a numeric rating (based upon a 100-point scale) of the relative degree of suitability or value of a given soil for intensive agriculture. The rating is based upon the character of the soil profile, surface texture, steepness of the slope, drainage, alkalinity, fertility, wind and water erosion, acidity, and microrelief.

Soil types present in the project site are summarized in **Table 4.2-1**.

**TABLE 4.2-1  
Project Site Soils – Farmland Designations**

Map Unit Symbol	Soil Name	NRCS Designation	LCC Class and Subclass (nonirrigated)	Storie Index	AUM
159	Dudgen-Graven complex, 0 to 5 percent slopes	Not prime farmland	IVw	Grade 4 Poor (21 – 40)	7.5 (Dudgen) 8.5 (Graven)
162	Esperanza loam, 0 to 2 percent slopes	Prime farmland if irrigated	IIIs	Grade 1 Excellent (81 – 100)	9
201	Jellycamp-Ollierivas complex, 2 to 9 percent slopes	Not prime farmland	VIIIs	Grade 4 Poor (21 – 40)	N/A
282	Pittville sandy loam 0 to 5 percent slopes	Prime farmland if irrigated	IIIs	Grade 3 Fair (41 - 60)	10
285	Pittville sandy loam, 15 to 30 percent slopes	Not prime farmland	IVe	Grade 4 Poor (21 to 40)	10

Source: Natural Resources Conservation Service, 2022. Soil Survey for Intermountain Area, California, Parts of Lassen, Modoc, Shasta and Siskiyou Counties, 2000.

As indicated in **Table 4.2-1**, none of the soils have an LCC classification of I or II. Esperanza loam has a Storie Index rating that classifies it as prime farmland. Other than the Jellycamp-Ollierivas complex, the soils have an AUM that classifies them as prime farmland.

According to the County’s Zoning Map, the majority of parcels in the study area are zoned Rural Residential (R-R) and Interim Rural Residential (I-R). The R-R and I-R zones allow agricultural uses outright, provided that the parcel size is at least one gross acre. The SR 299 corridor is bounded by parcels zoned Exclusive Agricultural (EA) and Exclusive Agricultural-Agricultural Preserve (EA-AP). The EA-AP zoning indicates parcels that are under a Williamson Act contract.

One parcel in which improvements would occur is subject to a Williamson Act contract; however, improvements on this parcel would occur within or adjacent to an existing driveway in an area that has not historically been used for grazing and does not currently support agricultural crops. Although improvements would occur in soils that are considered prime farmland due to their Storie Index and AUM rating, and on a parcel subject to a Williamson Act contract, improvements would be subsurface, and no permanent conversion of farmland would occur. Therefore, the proposed project would not result in the conversion of farmland to non-agricultural use, would not conflict with existing zoning for agricultural use, and would not conflict with a Williamson Act contract. There would be **no impact**.

**Question C**

According to the Shasta County General Plan and County Zoning Map, there are no Timberland Production zones or Timberland (TL) zones in the project area. The closest TL zone is about 0.5 miles southeast of LS 1 (Bridge Street). The project does not involve any work in or adjacent to timberlands.

As stated under Regulatory Context above, “forest land” is defined in PRC §12220(g) as land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish

and wildlife, biodiversity, water quality, recreation, and other public benefits. There are properties in the general area that meet the definition of forest land; however, the majority of improvements would occur in previously disturbed areas, and it is not anticipated that any mature trees would be removed. Therefore, there would be **no impact** on timberland or forest land.

## CUMULATIVE IMPACTS

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As documented above, the proposed project would not result in impacts to agriculture or forest resources; therefore, the proposed project would not contribute to adverse cumulative impacts to agriculture or forest resources.

## MITIGATION

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None necessary.

## DOCUMENTATION

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**Shasta County.** 2022. Shasta County Zoning Map. <https://maps.co.shasta.ca.us/ShastaCountyMap/>. Accessed April 2022.

**State of California, Department of Conservation.** 2016. Important Farmland Finder. <https://maps.conservacion.ca.gov/dlrp/ciff/>. Accessed April 2022.

**U.S. Department of Agriculture, Natural Resource Conservation Service.** 2022. Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed April 2022.

\_\_\_\_\_. 2000. Soil Survey for Intermountain Area, California, Parts of Lassen, Modoc, Shasta, and Siskiyou Counties. <https://nrcs.app.box.com/s/33gxkiz34ss3pbvcerixev0wz547r0u0/folder/167181950964>. Accessed December 2022.

## 4.3 AIR QUALITY

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## REGULATORY CONTEXT

### FEDERAL

#### Federal Ambient Air Quality Standards

The U.S. Environmental Protection Agency (USEPA), under the federal Clean Air Act (CAA), establishes maximum ambient concentrations for criteria air pollutants (CAPs), known as the National Ambient Air Quality Standards (NAAQS) (USEPA, 2022). The NAAQS are designed to protect the health and welfare of the populace with a reasonable margin of safety. **Table 4.3-1** identifies the seven CAPs as well as characteristics, health effects and typical sources for each CAP:

**TABLE 4.3-1  
Federal Criteria Air Pollutants**

Pollutant	Characteristics	Primary Effects	Major Sources
<b>Ozone (O<sub>3</sub>)</b>	Ozone is a colorless or bluish gas formed through chemical reactions between two major classes of air pollutants: reactive organic gases (ROG) and oxides of nitrogen (NO <sub>x</sub> ). These reactions are stimulated by sunlight and temperature; thus, ozone occurs in higher concentrations during warmer times of the year.	<ul style="list-style-type: none"> <li>Respiratory symptoms.</li> <li>Worsening of lung disease leading to premature death.</li> <li>Damage to lung tissue.</li> <li>Crop, forest, and ecosystem damage.</li> <li>Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals.</li> </ul>	Motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.

Pollutant	Characteristics	Primary Effects	Major Sources
<b>Carbon Monoxide (CO)</b>	Carbon monoxide is an odorless, colorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline and wood. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of carbon monoxide.	<ul style="list-style-type: none"> <li>• Chest pain in patients with heart disease.</li> <li>• Headache.</li> <li>• Light-headedness.</li> <li>• Reduced mental alertness.</li> </ul>	Motor vehicle exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>	<p>Nitrogen dioxide is a reddish-brown gas formed when nitrogen (N<sub>2</sub>) combines with oxygen (O<sub>2</sub>). Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition.</p> <p>Of the seven types of nitrogen oxide compounds, NO<sub>2</sub> is the most abundant in the atmosphere and is related to traffic density.</p>	<ul style="list-style-type: none"> <li>• Respiratory symptoms.</li> <li>• Damage to lung tissue.</li> <li>• Worsening of cardiovascular disease.</li> <li>• Precursor to ozone and acid rain.</li> <li>• Contributes to global warming and nutrient overloading which deteriorates water quality.</li> <li>• Causes brown discoloration of the atmosphere.</li> </ul>	Automobile and diesel truck exhaust, petroleum-refining operations, industrial sources, aircraft, ships, railroads, and fossil-fueled power plants.
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>	Sulfur dioxide is a colorless, nonflammable gas that results mainly from burning high-sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries.	<ul style="list-style-type: none"> <li>• Respiratory symptoms.</li> <li>• Worsening of cardiovascular disease.</li> <li>• Damage to a variety of materials, including marble, iron, and steel.</li> <li>• Damages crops and natural vegetation.</li> <li>• Impairs visibility.</li> <li>• Precursor to acid rain.</li> </ul>	Petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and large ships, and fuel combustion in diesel engines.
<b>Particulate Matter:</b> <b>PM<sub>2.5</sub></b> <b>PM<sub>10</sub></b>	<p>Particulate matter is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols that are small enough to remain suspended in the air for a long period of time.</p> <p>Particulate matter with a diameter of 10 microns or less (PM<sub>10</sub>) is inhalable into the lungs and can induce adverse health effects. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter (PM<sub>2.5</sub>). Therefore, PM<sub>2.5</sub> comprises a portion of PM<sub>10</sub>.</p>	<ul style="list-style-type: none"> <li>• Premature death.</li> <li>• Hospitalization for worsening of cardiovascular disease.</li> <li>• Hospitalization for respiratory disease</li> <li>• Asthma-related emergency room visits.</li> <li>• Increased symptoms, increased inhaler usage</li> </ul>	Dust- and fume-producing construction activities, power plants, steel mills, chemical plants, unpaved roads and parking lots, woodburning stoves and fireplaces, wildfires, motor vehicles, and other combustion sources. Also a result of photochemical processes.



Pollutant	Characteristics	Primary Effects	Major Sources
Lead	A heavy metal that occurs both naturally in the environment and in manufactured products.	<ul style="list-style-type: none"> <li>• Impaired mental functioning in children</li> <li>• Learning disabilities in children</li> <li>• Brain and kidney damage.</li> <li>• Reproductive disorders.</li> <li>• Osteoporosis.</li> </ul>	Lead-based industrial production (e.g., battery production and smelters), recycling facilities, combustion of leaded aviation gasoline by piston-driven aircraft, and crustal weathering of soils followed by fugitive dust emissions.

### Clean Air Act - Federal General Conformity Rule

The General Conformity Rule of the CAA requires that all federally funded projects conform to the applicable State Implementation Plan (SIP). The Conformity Rule applies to projects in areas that are designated as nonattainment or maintenance areas for any of the six federal criteria air pollutants when the total direct and indirect emissions of the criteria pollutant (or its precursors) are at or above the de minimis thresholds listed in Code of Federal Regulations (CFR) Title 40, §93.153(b). Because Shasta County is designated as attainment or unclassified areas for all federal air quality standards, federal conformity requirements do not apply to the proposed project.

## STATE

### State Ambient Air Quality Standards

The California CAA establishes maximum concentrations for the seven federal CAPs, as well as the four additional air pollutants identified below. The four additional standards are intended to address regional air quality conditions, not project-specific emissions. These maximum concentrations are known as the California Ambient Air Quality Standards (CAAQS) (CARB, 2022a). The California Air Resources Board (CARB) has jurisdiction over local air districts and has established its own standards for each CAP under the CAAQS. For areas within the State that have not attained air quality standards, the CARB works with local air districts to develop and implement attainment plans to obtain compliance with both federal and State air quality standards.

**Visibility-Reducing Particles.** Visibility-reducing particles vary greatly in shape, size, and chemical composition, and come from a variety of natural and manmade sources. Major sources include wildfires, residential fireplaces and woodstoves, windblown dust, ocean sprays, biogenic emissions, dust and fume-producing construction, industrial and agricultural operations, and fuel combustion. Primary effects include visibility impairment, respiratory symptoms, and worsening of cardiovascular disease.

**Sulfate (SO<sub>4</sub>).** Sulfate is oxidized to sulfur dioxide (SO<sub>2</sub>) during the combustion process and is subsequently converted to sulfate compounds in the atmosphere. Major sources include industrial processes and the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. Primary effects include respiratory symptoms, worsening of cardiovascular disease, damage to a variety of materials, including marble, iron, and steel, damage to crops and natural vegetation, and visibility impairment.

**Hydrogen Sulfide (H<sub>2</sub>S).** Hydrogen sulfide is a colorless gas with the odor of rotten eggs. Major sources include geothermal power plants, petroleum refineries, and wastewater treatment plants. Primary effects include eye irritation, headache, nausea, and nuisance odors.

**Vinyl Chloride (chloroethene).** Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. It is also listed as a toxic air contaminant because of its carcinogenicity. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites due to microbial breakdown of chlorinated solvents. Primary effects include dizziness, drowsiness, headaches, and liver damage.

Table 4.3-2 provides the federal and State ambient air quality standards:

**TABLE 4.3-2  
Federal and State Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards	National Standards
Ozone (O <sub>3</sub> )	8 Hour	0.070 ppm (137µg/m <sup>3</sup> )	0.070 ppm (137µg/m <sup>3</sup> )
	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	–
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )
	1 Hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )
Nitrogen Dioxide (NO <sub>2</sub> )	1 Hour	0.18 ppm (339 µg/m <sup>3</sup> )	100 ppb (188 µg/m <sup>3</sup> )
	Annual Arithmetic Mean	0.030 ppm (57 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )
Sulfur Dioxide (SO <sub>2</sub> )	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )	0.14
	3 Hour	–	–
	1 Hour	0.25 ppm (665 µg/m <sup>3</sup> )	75 ppb (196 µg/m <sup>3</sup> )
	Annual Arithmetic Mean	–	0.030 ppm
Particulate Matter (PM <sub>10</sub> )	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	–
	24 Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
Particulate Matter – Fine (PM <sub>2.5</sub> )	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>
	24 Hour	–	35 µg/m <sup>3</sup>
Sulfates	24 Hour	25 µg/m <sup>3</sup>	–
Lead	Calendar Quarter	–	1.5 µg/m <sup>3</sup>
	30 Day Average	1.5 µg/m <sup>3</sup>	–
	Rolling 3-Month Average	None	0.15 µg/m <sup>3</sup>
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )	–
Vinyl Chloride (chloroethene)	24 Hour	0.01 ppm (26 µg/m <sup>3</sup> )	–
Visibility-Reducing Particles	8 Hour	–	–

Source: CARB, 2022a; CARB, 2016. Notes: mg/m<sup>3</sup>=milligrams per cubic meter; ppm=parts per million; ppb=parts per billion; µg/m<sup>3</sup>=micrograms per cubic meter

### Toxic Air Contaminants

The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Assembly Bill 2588) was adopted in response to public concern regarding potential adverse health effects associated with emissions of toxic air contaminants (TACs) (CARB, n.d.). TACs are regulated under the California CAA. A "hot spot" is an area where air toxics levels are higher than in the overall region, which may be caused by emissions from a specific facility.

Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), grading and demolition of structures (asbestos), and diesel-motor vehicle exhaust. Facilities found to release high volumes of TACs are required to conduct a detailed health risk assessment that estimates emission impacts to the neighboring community and recommends mitigation to minimize TACs (CARB, 2022b).

### In-Use Off-Road Diesel-Fueled Fleets Regulation

CARB adopted the In-Use Off-Road Diesel-Fueled Fleets Regulation to reduce NO<sub>x</sub>, diesel particulate matter, and other criteria pollutant emissions from off-road heavy-duty diesel vehicles in California. The regulation covers a wide range of vehicle types, including, but not limited to, vehicles used in construction, mining, industrial operations, and other industries. The Regulation requires that fleets meet an increasingly stringent set of fleet average targets, culminating in 2023 for large and medium fleets, and in 2028 for small fleets. The most stringent fleet average target generally corresponds to a 2012 model year, or a Tier 3 average standard (CARB, 2022c).

All self-propelled off-road diesel vehicles 25 horsepower (HP) or greater used in California and most two-engine vehicles (except on-road two-engine sweepers) are subject to the regulation, including rented and leased vehicles. The regulation imposes limits on idling, restricts adding older vehicles into fleets, and requires fleet owners to reduce their emissions by retiring, replacing, repowering, or retrofitting older engines. In addition, the Portable Equipment Registration Program (PERP) requires all portable engines 50 HP or greater to be registered in PERP or be permitted by a local air district.

The regulations were most recently updated on November 17, 2022, and require fleets to phase-out use of the oldest and highest polluting off-road diesel vehicles in California earlier or beyond what is required of fleets in the Off-Road Regulation. The updated regulations also prohibit the addition of high-emitting vehicles to a fleet and require the use of renewable diesel (99 or 100 percent renewable) in off-road diesel vehicles. The amended regulations will be phased in starting in 2024 through the end of 2036 (CARB, 2022d, 2022e).

The amended regulations require that beginning January 1, 2024, public agencies that award or enter into contracts for public works projects obtain fleet Certificates of Reported Compliance from fleets prior to awarding public works contracts. These requirements will ensure that only compliant fleets are being used on public works projects.

CARB estimates that from 2024 through 2038, the amendments will generate an additional reduction above and beyond the current regulation of approximately 31,087 tons of NO<sub>x</sub> and 2,717 tons of PM<sub>2.5</sub>. About half of those additional reductions are expected to be realized within the first five years of implementation.

## **LOCAL**

### **Shasta County Air Quality Management District (SCAQMD):**

The SCAQMD has the responsibility of enforcing federal and state air quality regulations in Shasta County. The SCAQMD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs, and it regulates agricultural burning. All projects in Shasta County are subject to applicable SCAQMD rules and regulations in effect at the time of construction. Descriptions of specific rules applicable to the proposed project may include, but are not limited to:

- SCAQMD Rule 3-2, Specific Air Contaminants, states that no person shall discharge contaminants from any single source into the atmosphere above the amounts designated in the Rule.
- Cutback and emulsified asphalt application shall be conducted in accordance with SCAQMD Rule 3-15, Cutback and Emulsified Asphalt.
- SCAQMD Rule 3-16, Fugitive, Indirect, or Non-Traditional Sources, controls the emission of fugitive dust during earth-moving, construction, demolition, bulk storage, and conditions resulting in wind erosion.
- Architectural coatings and solvents shall be compliant with SCAQMD Rule 3-31, Architectural Coatings.

Shasta County is currently designated as a non-attainment-transitional area for State ozone standards; the County is designated as an attainment or unclassified area for all other federal and State ambient air quality standards (CARB, 2022g).

The SCAQMD, along with other air districts in the Northern Sacramento Valley Air Basin (NSVAB), jointly prepared an Air Quality Attainment Plan (AQAP) for the purpose of achieving and maintaining healthful air quality throughout the air basin. The Northern Sacramento Valley Planning Area (NSVPA) 2021 AQAP constitutes the region's State Implementation Plan (SIP) and was adopted by the SCAQMD Board on April 5, 2022.

The 2021 AQAP states that air pollution transport studies have demonstrated that a significant number of the ozone violations occurring in Shasta County are caused when pollutants from urban areas are

transported aloft throughout the air basin. Shasta County's primary emphasis in implementing the 2021 AQAP is to attempt to reduce emissions from mobile sources through public education and grant programs.

As shown in **Table 4.3-3**, Shasta County has adopted air quality thresholds for emissions of Reactive Organic Gases (ROG), Oxides of Nitrogen (NO<sub>x</sub>) and Particulate Matter, 10 microns in size (PM<sub>10</sub>) to determine the level of significance for projects subject to CEQA review (Shasta County Rule 2:1, New Source Review, Part 300).

**TABLE 4.3-3  
Thresholds of Significance for Criteria Pollutants of Concern**

<b>Level</b>	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>
Level A: Indirect Source	25 lbs/day	25 lbs/day	80 lbs/day
Level B: Indirect Source	137 lbs/day	137 lbs/day	137 lbs/day
Direct Sources	25 tons/year	25 tons/year	25 tons/year

*Source: 2004 Shasta County General Plan, Chapter 6.5 (Air Quality).*

All discretionary projects in Shasta County are required to implement Standard Mitigation Measures (SMMs) to minimize emissions and contribute to a reduction in cumulative impacts. Projects that generate unmitigated emissions above Level A must implement Best Available Mitigation Measures (BAMM) in addition to the SMMs. If a project is not able to reduce emissions below the Level B threshold, emissions offsets are required. If after applying the emissions offsets, the project emissions still exceed the Level B threshold, an Environmental Impact Report is required.

### **Shasta County**

The County's General Plan includes the following Objective and Policies related to air quality:

<b>Air Quality Element</b>		
<b>Objective</b>	AQ-2	To meet the requirements of the: (1) Federal Clean Air Act, and (2) the California Clean Air Act as soon as feasible.
<b>Policies</b>	AQ-2b	Work to accurately determine and fairly mitigate the local and regional air quality impacts of projects proposed in the unincorporated portions of Shasta County.
	AQ-2c	New projects shall be required to reduce their respective air quality impacts to below levels of significance, or proceed as indicated in Policy AQ-2e.
	AQ-2d	Ensure that air quality impacts identified during CEQA review are; (1) consistently and fairly mitigated, and (2) mitigation measures are feasible.
	AQ-2e	Cooperate with the AQMD in assuring that new projects with stationary sources of emissions of non-attainment pollutants or their precursors that exceed 25 tons per year shall provide appropriate emission offsets. A comparable program which offsets indirect emissions of these pollutants exceeding 25 tons per year from development projects shall also be utilized to mitigate air pollution impacts. An Environmental Impact Report will be required for all projects that have unmitigated emissions of non-attainment pollutants exceeding 25 tons per year.
	AQ-2f	Require appropriate Standard Mitigation Measures and Best Available Mitigation Measures on all discretionary land use applications as recommended by the AQMD in order to mitigate both direct and indirect emissions of non-attainment pollutants.

## DISCUSSION OF IMPACTS

### Questions A and B

As discussed under Regulatory Context, the NSVAB 2021 AQAP serves as the air quality plan for the region. The project would result in the temporary generation of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and other regulated pollutants during construction. ROG and NO<sub>x</sub> emissions would be associated with employee vehicle trips, delivery of materials, and construction equipment exhaust. PM<sub>10</sub> would be generated during site preparation, excavation, road paving, and from exhaust associated with construction equipment.

Project emissions were estimated using Version 2022.1.0 of the California Emissions Estimator Model (CalEEMod). CalEEMod reports both maximum daily emissions (pounds per day) and overall annual emissions (tons per year) for both construction and operational emissions. CalEEMod does not directly calculate ozone (O<sub>3</sub>) emissions. Instead, emissions of ozone precursors are calculated. Ozone precursors are quantified as ROG and NO<sub>x</sub> which, when released, interact in the atmosphere and produce ozone. Output files, as well as all site-specific inputs and assumptions, are provided in **Appendix A**. Project-specific assumptions and inputs include, but are not limited to, the following. CalEEMod provides default values when site-specific inputs are not available.

- Emissions from construction are based on all construction-related activities, including but not limited to grading, site preparation, use of construction equipment, material hauling, trenching, and paving.
- Construction would start in the summer of 2024 and occur over a period of approximately 24 months.
- Total land disturbance would be approximately 5.2 acres; 47,000 cubic yards (CY) of dirt would be imported; 47,000 CY would be exported.
- The total area to be re-paved following pipeline installation would be 2.6 acres.
- The total weight of demolition debris (pavement) to be removed from the project site would be approximately 2,800 tons.

### Construction Emissions

**Table 4.3-4** shows the highest daily levels of project construction emissions regardless of construction phase. Because the FRVCSO is applying for funding through the CWSRF Program, which is partially funded by the USEPA, **Table 4.3-4** also shows estimated emissions in tons per year in accordance with CWSRF requirements.

**TABLE 4.3-4**  
**Estimated Construction Emissions**

Year	Pollutants of Concern											
	ROG		NO <sub>x</sub>		PM <sub>10</sub>		PM <sub>2.5</sub>		CO		SO <sub>2</sub>	
	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year
<b>2024</b>	3.89	0.09	<b>37.0</b>	0.86	7.52	0.16	4.50	0.10	36.9	0.87	0.06	Trace
<b>2025</b>	2.25	0.13	20.3	0.99	4.18	0.18	2.26	0.10	22.3	1.13	0.04	Trace
<b>2026</b>	2.10	0.05	19.0	0.46	4.09	0.10	2.18	0.05	21.4	0.52	0.04	Trace

Source: CalEEMod, 2022

As shown in **Table 4.3-4**, construction of the proposed project would not exceed the County's Level A or Level B thresholds for ROG or PM<sub>10</sub> in any of the construction years, and would not exceed the Level A or Level B thresholds for NO<sub>x</sub> in construction years 2025 and 2026. Construction would exceed the County's Level A threshold of 25 pounds per day for NO<sub>x</sub> emissions in construction year 2024 but would not exceed the Level B threshold of 137 pounds per day.



As stated under Regulatory Context, all discretionary projects in Shasta County are required to implement SMMs to minimize emissions and contribute to a reduction in cumulative impacts. Projects that generate unmitigated emissions above Level A must implement BAMMs in addition to the SMMs. **Mitigation Measure (MM) 4.3.1** includes SMMs that would apply to the project. **MM 4.3.2** includes BAMMs to minimize NO<sub>x</sub> emissions during construction.

In addition, as stated under Regulatory Context, the In-Use Off-Road Diesel-Fueled Fleets Regulation was most recently updated on November 17, 2022, and require fleets to phase-out use of the oldest and highest polluting off-road diesel vehicles in California earlier or beyond what is required of fleets in the previous regulation. The updated regulations also require the use of renewable diesel in off-road diesel vehicles. The amended regulations will be phased in starting in 2024 through the end of 2036. CARB estimates that from 2024 through 2038, the amendments will generate an additional reduction above and beyond the current regulation of approximately 31,087 tons of NO<sub>x</sub> and 2,717 tons of PM<sub>2.5</sub>. About half of those additional reductions are expected to be realized within the first five years of implementation.

**Operational Emissions**

Project-specific assumptions and inputs include, but are not limited to, the following:

- A new emergency standby diesel-powered generator would be installed at each of the two new lift stations. The generators would be operated for limited times during monthly testing, and during prolonged power outages.
- To the extent feasible, the new sewer mains and laterals will be gravity fed to minimize the amount of pumping required to convey wastewater to the WWTP.
- Operation of Septic Tank Effluent Pump (STEP) systems at properties along SR 299 and the new aeration system at the WWTP would result in indirect emissions associated with energy use.
- The project would result in a decrease in energy use at the existing lift stations because the old, inefficient equipment at the existing lift stations would be replaced with new, energy-efficient models.

**Table 4.3-5** shows the estimated highest daily levels of operational emissions by source. For the proposed project, mobile sources include on-road motor vehicles and off-road engines and equipment used for maintenance activities. Area-wide sources include consumer products, architectural coatings, and road dust. Energy sources include electricity generated from fossil fuels (indirect emissions) that is used to operate pumps, motors, aerators, etc. Stationary sources include the emergency generator.

**TABLE 4.3-5  
Estimated Operational Emissions**

Source	Pollutants of Concern											
	ROG		NO <sub>x</sub>		PM <sub>10</sub>		PM <sub>2.5</sub>		CO		SO <sub>2</sub>	
	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year
<b>Mobile</b>	0.01	Trace	0.01	Trace	0.01	Trace	Trace	Trace	0.08	0.01	Trace	Trace
<b>Area</b>	0.05	0.01	Trace	Trace	Trace	Trace	Trace	Trace	0.04	Trace	Trace	Trace
<b>Energy</b>	Trace	Trace	0.01	Trace	Trace	Trace	Trace	Trace	0.01	Trace	Trace	Trace
<b>Stationary</b>	0.33	0.09	0.99	0.29	0.05	0.01	0.05	0.01	1.19	0.34	Trace	Trace
<b>Total</b>	<b>0.39</b>	<b>0.10</b>	<b>1.02</b>	<b>0.29</b>	<b>0.05</b>	<b>0.01</b>	<b>0.05</b>	<b>0.01</b>	<b>1.33</b>	<b>0.36</b>	<b>Trace</b>	<b>Trace</b>

Source: CalEEMod, 2022

Note: Totals may not add due to rounding.

As shown in **Table 4.3-5**, operational emissions associated with the proposed project would not exceed the County's Level A or Level B thresholds for ROG, NO<sub>x</sub>, or PM<sub>10</sub> and no mitigation is required.

For both construction and operational emissions, the proposed project would not result in significant impacts associated with ozone (O<sub>3</sub>), lead (Pb), hydrogen sulfide (H<sub>2</sub>S), vinyl chloride, or visibility-reducing particles as discussed below.

**Ozone.** CalEEMod does not directly calculate ozone emissions. Instead, the emissions associated with ozone precursors (ROG and NO<sub>x</sub>) are calculated. Construction would exceed the County's Level A threshold of 25 pounds per day for NO<sub>x</sub> emissions in construction year 2024 but would not exceed the Level B threshold of 137 pounds per day. **MM 4.3.1** includes SMMs that would apply to the project, and **MM 4.3.2** includes BMMs to minimize NO<sub>x</sub> emissions during construction. Implementation of **MM 4.3.1** and **MM 4.3.2** and compliance with State regulations ensures that impacts associated with ozone precursor emissions are less than significant.

**Lead.** Elevated levels of airborne lead at the local level are usually found near industrial operations that process materials containing lead, such as smelters and battery manufacturing/recycling facilities. As these conditions are not applicable to the proposed project, there is no potential for lead emissions.

**Hydrogen Sulfide.** Hydrogen sulfide is a colorless gas with an odor of rotten eggs. It is formed during the decomposition of organic material in anaerobic environments, including sewage collection and treatment processes. Poorly maintained and leaking septic systems can result in the release of hydrogen sulfide into the atmosphere. Abandoning the septic systems as proposed would eliminate potential hydrogen sulfide emissions in areas with failing septic systems.

Hydrogen sulfide emissions are more likely to occur in the collection system when there is a low dissolved oxygen content, high-strength wastewater, increased wastewater temperatures, and extended detention times. For example, in areas of low slope, sewage flows decrease and can result in the settling of organic solids and debris/grit in the sewer lines, allowing the sewage to become oxygen deficient or septic, thereby resulting in higher concentrations of hydrogen sulfide. These conditions can also occur at pump stations if they are not properly designed and maintained.

The collection system improvements will be designed by a licensed engineer to ensure that system components are sized to accommodate the anticipated increased flows and to minimize impacts associated with extended detention times. The FRVCSO will also provide routine maintenance and ensure that sewer pipes and lift stations are periodically inspected and cleaned to minimize the generation of hydrogen sulfide emissions.

Sewage conveyed to the WWTP is confined to the oxidation/evaporation ponds, which treat wastewater through the interaction of sunlight, bacteria, and algae. Hydrogen sulfide is generated in the ponds when aerobic conditions are not maintained (due to poor pond circulation, organic overloading, scum accumulation on the pond surface, spring/fall turnover of ponds, etc.).

The project could nearly double flows to the WWTP, which would result in an increased potential for hydrogen sulfide emissions. To accommodate the additional wastewater flows that would be generated by the project and minimize hydrogen sulfide emissions from the WWTP, a new earthen pond would be constructed inside the footprint of one of the existing ponds to facilitate more concentrated treatment with diffused aeration. The new pond would be deeper than the existing (surrounding) pond and would hold more water with less exposed water surface area.

As described in Section 3.2 (Project Components/Physical Improvements), aerators would mix the pond water and help reduce the build-up of sludge at the bottom of the pond. The aerators would also add dissolved oxygen to the pond, which would facilitate the growth of naturally-occurring bacteria that would remove organic pollutants and minimize hydrogen sulfide

emissions/odors. Therefore, potential impacts related to the increase in hydrogen sulfide emissions that would occur as a result of the proposed project would be less than significant.

**Vinyl Chloride.** Vinyl chloride is used to manufacture PVC plastic and other vinyl products. Additionally, vinyl chloride is produced during the microbial breakdown of chlorinated solvents (e.g., engine cleaner, degreasing agent, adhesive solvents, paint removers, etc.). The project does not include any components that would generate vinyl chloride emissions.

**Visibility-Reducing Pollutants.** Visibility-reducing pollutants generally consist of sulfates, nitrates, organics, soot, fine soil dust, and coarse particulates. These pollutants contribute to the regional haze that impairs visibility, in addition to affecting public health. According to the California Regional Haze Plan (CARB, 2022h), air pollutants that contribute to regional haze come from natural sources (e.g., wildfires, windblown dust, plants, etc.) and human-made sources (e.g., industrial/manufacturing processes, motor vehicle exhaust, residential wood burning, etc.). For the proposed project, visibility-reducing pollutants, would be generated only during construction activities and would cease when construction is complete.

Compliance with applicable federal, State, and local regulations and implementation of **MM 4.3.1** and **MM 4.3.2** ensures that the project would not conflict with the NSVAB 2021 AQAP and would not result in a cumulatively considerable net increase in ROG and NO<sub>x</sub> emissions; impacts would be **less than significant**.

### Question C

See discussion under Regulatory Context and **Questions A and B**. Sensitive receptors are individuals or groups of people that are more affected by air pollution than others, including young children, elderly people, and people weakened by disease or illness. Locations that may contain high concentrations of sensitive receptors include residential areas, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes.

As discussed in Questions A and B above, the proposed project does not have any components that would result in significant long-term operational emissions; however, construction activities would generate NO<sub>x</sub>, PM<sub>10</sub> and other pollutants. Construction would occur adjacent to single-family residences throughout most of the work area. Construction would also occur in proximity to Fall River Elementary School on Curve Street in Fall River Mills; Soldier Mountain High School and Fall River Community Day School on A Street in McArthur; the Fall River Junior-Senior High School on Walnut Street in McArthur; and Mayers Memorial Hospital on SR 299 in Fall River Mills. Although emissions from construction activities would cease with completion of the project, sensitive receptors adjacent to the construction area could be exposed to elevated dust levels and other pollutants.

Compliance with federal, State, and local regulations, and implementation of **MM 4.3.1** and **MM 4.3.2** would minimize the exposure of sensitive receptors to substantial pollutant concentrations and ensure that impacts would be **less than significant**.

### Question D

During construction, odors would be emitted from diesel equipment, generation of fugitive dust, and paving (asphalt). Odors and similar emissions from construction are intermittent and temporary, and generally would not extend beyond the construction area. Due to the temporary and intermittent nature of construction odors, impacts during construction would be less than significant.

As stated under Questions A and B, hydrogen sulfide, which is a colorless gas known for its rotten egg smell, is generated in sewage when sulfates are converted to hydrogen sulfide by bacteria that are present on pipe walls or in the wastewater. The collection system will be design by a licensed engineer to ensure that system components are sized to accommodate the anticipated increased flows and to minimize impacts associated with extended detention times. The FRVCSO will also ensure that sewer pipes are periodically cleaned and that the lift stations are properly maintained to minimize odors.

Odors from the WWTP occur primarily from the decomposition process at the bottom of the ponds where the oxygen supply is low. Presently, the WWTP utilizes a sodium hypochlorite (bleach) injection system to control odors; however, this system is occasionally not effective at controlling odors. To minimize odors that could result from the proposed project, a new aeration basin would be installed in one of the WWTP ponds. The aerators would mix the pond water and help reduce the build-up of sludge at the bottom of the pond, and would also add dissolved oxygen to the pond. This would facilitate the growth of naturally-occurring bacteria that would remove organic pollutants and minimize hydrogen sulfide emissions/odors. Addition of the aeration system would effectively minimize odors from the increased flows that would result from the project. The project does not include any other operational components that would generate long-term odors that could adversely affect a substantial number of people.

Therefore, because odors during construction are a temporary impact; the collection system will be designed by a licensed engineer, routine maintenance would be completed by the FRVCSD, and the addition of aeration at the WWTP would minimize the potential for odors, impacts associated with odors would be *less than significant*.

## CUMULATIVE IMPACTS

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Past, present, and future development projects contribute to a region's air quality conditions on a cumulative basis; therefore, by its very nature, air pollution is largely a cumulative impact. If a project's individual emissions contribute toward exceedance of the NAAQS or the CAAQS, then the project's cumulative impact on air quality would be considered significant.

The proposed project combined with future development within the project area could lead to cumulative impacts to air quality. However, as stated under Regulatory Context, all projects in the County are subject to SCAQMD rules and regulations, including mitigation measures that address impacts during construction. As documented above, the project would not result in significant impacts associated with hydrogen sulfide/odors. In addition, implementation of **MM 4.3.1** and **MM 4.3.2**, and compliance with the regulations identified under Regulatory Context, ensures that the proposed project would have a less-than-significant cumulative impact on local and regional air quality.

## MITIGATION

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### **MM 4.3.1 The following measures shall be implemented throughout construction:**

- a. All material excavated, stockpiled, or graded shall be covered or sufficiently watered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of ambient air quality standards. Watering shall occur at least twice daily with complete site coverage, preferably in the mid-morning and after work is completed each day.
- b. All material transported offsite shall be either sufficiently watered or securely covered to prevent a public nuisance.
- c. All areas (other than paved roads) with vehicle traffic shall be watered periodically or have dust palliatives applied for stabilization of dust emissions.
- d. All on-site vehicles shall be limited to a speed of 15 miles per hour on unpaved roads.
- e. All land clearing, grading, earth moving, and excavation activities on the project site shall be suspended when winds are causing excessive dust generation.
- f. All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least two feet of free board in accordance with the requirements of Section 23114 of the California Vehicle Code.
- g. Paved streets in and adjacent to the construction site shall be swept or washed at the end of the day (or more frequently if needed) to remove excessive accumulations of silt and/or mud resulting from activities on the development site.

- h. When not in use, motorized construction equipment shall not be left idling for more than five minutes.
- i. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications.

**MM 4.3.2 The following measures shall be implemented to minimize NO<sub>x</sub> emissions during construction:**

- a. Prior to commencement of construction activities, the contractor shall provide evidence to the Fall River Valley Community Services District (FRVCSD) that all diesel-fueled construction equipment including but not limited to rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors, meets or exceeds California Air Resources Board (CARB) Tier 4 final off-road emissions standards. If more stringent requirements are in place at the time of construction, the most stringent requirements shall apply.

An exemption from these requirements may be granted by the FRVCSD in the event that the contractor provides documentation that Tier 4 Final equipment is not reasonably available and that corresponding reductions in NO<sub>x</sub> emissions would be achieved from other construction equipment.

- b. Alternatively-fueled construction equipment shall be used, where feasible (e.g., compressed natural gas (CNG), liquefied natural gas (LNG), propane, biodiesel, or advanced technologies that do not rely on diesel fuel).

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## 4.4 BIOLOGICAL RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community, including oak woodland, identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on state or federally protected wetlands, (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## REGULATORY CONTEXT

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### FEDERAL

#### **Federal Clean Water Act**

##### *Section 404*

Under Section 404 of the Clean Water Act (CWA), the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and fill material into wetlands and waters of the U.S. The USACE requires that a permit be obtained prior to the placement of structures within, over, or under navigable waters and/or prior to discharging dredged or fill material into waters below the ordinary high-water mark (OHWM).

There are several types of permits issued by the USACE that are based on the project's location and/or level of impact. Regional general permits are issued for recurring activities at a regional level. Nationwide permits (NWP) authorize a wide variety of minor activities that have minimal effects. Projects that are not covered under a regional general permit and do not qualify for a NWP are required to obtain a standard permit (e.g., individual permit or letter of permission).

##### *Section 401*

Under Section 401 of the CWA, a project requiring a USACE Section 404 permit is also required to obtain a State Water Quality Certification (or waiver) to ensure that the project will not violate established State water quality standards. The Regional Water Quality Control Board (RWQCB) regulates waters of the State and has a policy of no-net-loss of wetlands. The RWQCB typically requires mitigation for impacts to wetlands before it will issue a water quality certification.

#### **Federal Endangered Species Act**

The Federal Endangered Species Act (FESA) of 1973 requires that all federal agencies ensure that any action they authorize, fund, or carry out will not likely jeopardize the continued existence of federally listed species or result in the destruction or adverse modification of critical habitat. Projects that would result in "take" of any federally listed species are required to obtain authorization from National Marine Fisheries Service (NMFS) and/or U.S. Fish and Wildlife Service (USFWS) through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project.

#### **Federal Migratory Bird Treaty Act**

Under the Migratory Bird Treaty Act (MBTA) of 1918, as amended, migratory bird species listed in Code of Federal Regulations (CFR) Title 50, §10.13, including their nests and eggs, are protected from injury or death, and any project-related disturbances. The MBTA applies to over 1,000 bird species, including geese, ducks, shorebirds, raptors, and songbirds, some of which were near extinction before MBTA protections were put in place in 1918. The MBTA provides protections for nearly all native bird species in the U.S., including non-migratory birds.

#### **Fish and Wildlife Conservation Act**

Under the Fish and Wildlife Conservation Act of 1980, as amended, the USFWS maintains lists of migratory and non-migratory birds that, without additional conservation action, are likely to become candidates for listing under the FESA. These species are known as Birds of Conservation Concern and represent the highest conservation priorities.

#### **Bald and Golden Eagle Protection Act**

This Act provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds and their occupied and unoccupied nests.

## **Magnuson-Stevens Fishery Conservation and Management Act**

The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), also known as the Sustainable Fisheries Act, requires the identification of Essential Fish Habitat (EFH) for federally managed fishery species and implementation of appropriate measures to conserve and enhance EFH that could be affected by project implementation. All federal agencies must consult with NMFS on projects authorized, funded, or undertaken by that agency that may adversely affect EFH for species managed under the MSFCMA.

## **STATE**

### **Porter-Cologne Water Quality Control Act**

The Porter-Cologne Water Quality Control Act (California Water Code §13000 *et seq.*) is the principal law governing water quality in California. It establishes a comprehensive program to protect water quality and the beneficial uses of waters of the State. The Porter-Cologne Act applies to surface waters, wetlands, and groundwater, and to both point and non-point sources of pollution. The Act requires a Report of Waste Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. The RWQCBs enforce waste discharge requirements (WDRs) identified in the Report.

### **Water Quality Control Plan (Basin Plans)**

The CVRWQCB adopted a Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins, Fifth Edition, in May 2018, as well as subsequent amendments to the Plan. The Basin Plan identifies beneficial uses to be protected for both surface water and groundwater and establishes water quality criteria designed to protect those uses. WDRs were adopted in order to attain the beneficial uses identified in the Basin Plan. Water quality affects municipal, industrial, agricultural, and in-stream water uses as well as the health of terrestrial habitats. Because changes in water quality can indicate changes in other watershed processes or components, measurements of water quality are a favored, non-biological indicator of watershed condition.

### **State Water Resources Control Board Wetland Riparian Area Protection Policy and Water Quality Certification Program**

In 2019, the State Water Resources Control Board (SWRCB) adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) (SWRCB, 2021a, 2021b). The Procedures consist of four major elements:

1. A wetland definition;
2. A framework for determining if a wetland feature is a water of the State;
3. Wetland delineation procedures; and
4. Procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

The Water Quality Certification Program regulates the removal or placement of materials in wetlands and waterways in the State. The Program protects all waters, but has special responsibility for wetlands, riparian areas, and headwaters because these waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs.

The State's Water Quality Certification is issued pursuant to Section 401 of the Clean Water Act to certify that the project approved by the USACE Section 404 permit will also meet State water quality requirements. The Program implements the State's no-net-loss policy for wetlands to ensure no overall net loss and long-term gain in the quantity, quality, and permanence of wetland acreage and values. Mitigation for the loss of wetlands could include creating new wetlands and/or preserving/restoring existing wetlands and enhancing their functionality.

## California Endangered Species Act

Under the California Endangered Species Act (CESA), the Fish and Game Commission is responsible for listing and delisting threatened and endangered species, including candidate species for threatened or endangered status. CDFW maintains documentation on listed species, including occurrence records. In addition, CDFW maintains a list of fully protected species, most of which are also listed as threatened or endangered. CDFW also maintains a list of species of special concern (SSC). SSC are vulnerable to extinction but are not legally protected under CESA; however, impacts to SSC are generally considered significant under CEQA.

CESA prohibits the take of State-listed threatened and endangered species, but CDFW has the authority to issue incidental take permits under special conditions when it is demonstrated that impacts are minimized and mitigated. Fully protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take. One exception allows the collection of fully protected species for scientific research.

## California Fish and Game Code §1600-1616 (Streambed Alteration)

California Fish and Game Code §1600 *et seq.*, requires that a project proponent enter into a Streambed Alteration Agreement (SAA) with CDFW prior to any work that would divert or obstruct the natural flow of any river, stream, or lake; change the bed, channel, or bank of any river, stream, or lake; use material from any river, stream, or lake; and/or deposit or dispose of material into any river, stream, or lake. An SAA will typically include conditions that minimize/avoid potentially significant adverse impacts to riparian habitat and waters of the State.

## California Fish and Game Code §3503 and 3503.5 (Nesting Bird Protections)

These sections of the Code provide regulatory protection to resident and migratory birds and all birds of prey within the State and make it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Code.

## California Fish and Game Code §1900-1913 (Native Plant Protection Act)

The Native Plant Protection Act (NPPA) includes measures to preserve, protect, and enhance native plants that are listed as rare and endangered under the CESA. The NPPA states that no person shall take, possess, sell, or import into the State, any rare or endangered native plant, except in compliance with provisions of the Act.

## Oak Woodlands Conservation (SB 1334, 2004)

SB 1334 of 2004 added §21083.4 to CEQA to require counties to determine whether a project within the county's jurisdiction may result in the conversion of oak woodlands that would have a significant effect on the environment. If a county determines that there may be a significant effect on oak woodlands, the county must require mitigation to minimize/offset the conversion of oak woodlands.

## LOCAL

### Shasta County

The Shasta County General Plan includes the following Objective and Policy that apply to the proposed project:

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#### Chapter 6.7, Fish and Wildlife

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**Objective:** FW-1 Protection of significant fish, wildlife, and vegetation resources.

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**Policy:** FW-c Projects that contain or may impact endangered and/or threatened plant or animal species, as officially designated by the California Fish and Game Commission and/or the U. S. Fish and Wildlife Service, shall be designed or conditioned to avoid any net adverse project impacts on those species.

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## DISCUSSION OF IMPACTS

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### Question A

The evaluation of potential impacts on special-status plant and wildlife species entailed records searches and field evaluations conducted by ENPLAN and documented in the Biological Study Report (BSR) prepared for the project (see **Appendix B**).

The records searches included a review of California Natural Diversity Data Base (CNDDDB) records for special-status plants and wildlife; California Native Plant Society (CNPS) records for special-status plant species; federal records for listed, proposed, and candidate plant and wildlife species under jurisdiction of the USFWS; and critical habitat data maintained by the USFWS. NMFS does not maintain species lists for the project quadrangle because Shasta Dam and Keswick Dam prevent anadromous salmonids in the Sacramento River from accessing spawning/rearing habitat in the Pit River. The USFWS does not identify designated critical habitat in the study area.

To determine the presence/absence of special-status plant and animal species in the study area, ENPLAN biologists conducted botanical and wildlife surveys on June 17, 2020, and April 6, May 19, June 23, and July 23, 2022. The special-status plant species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. Some of the special-status wildlife species would not have been evident at the time the fieldwork was conducted; however, determination of their potential presence could readily be made based on observed habitat characteristics.

Because some of the proposed improvements would be located on private property, and locations of laterals have not yet been confirmed, the biologists were not able to access all areas within the project footprint. **Appendix C** includes maps showing all areas that were surveyed by the biologists.

**MM 4.4.1** requires that in conjunction with preparation of the final improvement plans, the project engineer shall identify all improvements that would occur outside of the previously surveyed area. All areas within the project footprint that were not previously surveyed for special-status plants, special-status animals, and wetlands and waters of the U.S. and State, shall be surveyed by a qualified biologist. The biologist shall consult with the USACE, CVRWQCB, CDFW, and other applicable agencies to determine required resource agency permits and permit conditions. Any mitigation requirements shall be satisfied prior to commencement of earth-disturbing activities or as otherwise specified in applicable resource agency permits.

#### ***Special-Status Plant and Animal Species***

The potential for special-status plant and animal species to occur in the study area is evaluated in the BSR (**Appendix B**). As documented in **Appendix B**, no special-status plant or animal species were observed during the field surveys. Three special-status wildlife species have a potential to be present in the project area: tricolored blackbird, Townsend's big-eared bat, and western pond turtle.

Fresh emergent and riparian vegetation along the banks of the Fall River adjacent to LS 1 provide suitable nesting habitat for the tricolored blackbird; however, work at LS 1 would occur inside of the building, and there is no potential for impacts to this species as a result of project implementation. Structures in the general project area may provide potential roosting habitat for Townsend's big-eared bat, and the species may forage in the project area; however, there is no suitable roosting habitat in the project site, and Townsend's big-eared bat would not be adversely affected by project implementation.

Western pond turtles are known to occur in the Fall and Pit Rivers and may nest and/or overwinter along the banks of the rivers. Although LS 1 is located adjacent to the Fall River, improvements would occur inside the building, and there is no potential for impacts to pond turtles at the LS 1 site.

Western pond turtles could also potentially be present in the wastewater treatment ponds. Work in and adjacent to the treatment ponds would consist of creating a new aeration basin within one of the existing ponds, and constructing a new building to house the aeration equipment and controls. The pond would be dewatered prior to construction of the aeration basin and any turtles present would migrate to an active pond. Although no in-water work would occur, there is some potential that turtles could be present on the earthen berms between the ponds or elsewhere in the work area. As required by **MM 4.4.2**, if pond turtles are observed in the work area, construction activities would cease within 25 feet of the turtle until the turtle leaves the area or is relocated by a qualified biologist.

Indirect effects on aquatic species and their habitats could occur during earth-disturbing activities if the eroded soils are washed into downstream waters. As discussed in Section 1.8 (Regulatory Requirements), the FRVCSD is required to develop a SWPPP that includes BMPs to control erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat. BMPs may include, but are not limited to, limiting construction to the dry season; use of straw wattles, silt fences, and/or gravel berms to prevent sediment from discharging to surface waters and sensitive habitats; and revegetating temporarily disturbed sites upon completion of construction. Given the existing requirement for erosion control BMPs during project construction, no further mitigation is needed to protect downstream aquatic habitats.

### ***Birds of Conservation Concern***

The project is located within the Pacific Flyway, and it is possible that birds could nest in or adjacent to the study area. Nesting birds, if present, could be directly or indirectly affected by construction activities. Direct effects could include mortality resulting from vegetation removal and/or construction equipment operating in an area with an active nest containing eggs or young. Construction activities that occur in surfaced roadways and graveled roadways would not directly affect nesting birds because no nesting habitat would be affected; indirect effects in these areas, such as nest abandonment by adults in response to loud noise levels and other human-induced disturbances are likewise not expected given the level of human activity in these locations. Any birds that may nest adjacent to roadways would be accustomed to periodic loud noises and other human-induced noise.

Construction activities that occur in the force main corridor between SR 299 and the WWTP, in the WWTP ponds, and in areas in which vegetation would be removed have the potential to impact nesting birds, if present.

In the local area, most birds nest between February 1 and August 31. As required by **MM 4.4.3**, the potential for adversely affecting nesting birds can be greatly minimized by removing vegetation and conducting construction activities between September 1 and January 31. If this is not possible, a nesting survey shall be conducted within one week prior to removal of vegetation and/or the start of construction. If active nests are found on the project site, FRVCSD shall implement measures to comply with the Migratory Bird Treaty Act and California Fish and Game Code. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures, and biological monitoring.

Use of BMPs for spill prevention and erosion control and implementation of **MM 4.4.1**, **MM 4.4.2**, and **MM 4.4.3** ensures that direct and indirect impacts to special-status species and their habitats are ***less than significant***.

### **Questions B and C**

Sensitive natural communities are native plant communities that CDFW has identified as having limited distribution in the State or within a region, and that are vulnerable to environmental impacts of development. Sensitive natural communities may or may not contain special-status plant species. CDFW assigns State rarity and threat rankings for terrestrial natural communities. Natural communities ranked S1 (critically imperiled), S2 (imperiled), and S3 (vulnerable) are considered sensitive natural communities. Wetlands and riparian habitats are also typically considered sensitive communities.



As documented in **Appendix B**, habitat types in the study area include urban, annual grassland, sagebrush, barren, stream/riverine, and open-water habitat (WWTP ponds).

The primary habitat in the study area is urban and consists of paved roads and developed residential and commercial properties. Residential and commercial properties support a wide range of vegetation, including native species, introduced weeds, and ornamental/horticultural species. Annual grassland habitat is present along roadsides, in previously disturbed areas, and on some of the residential properties. Representative species include Shasta popcorn-flower, common dandelion, bindweed, foxtail chess, annual ryegrass, medusahead, and western buttercup.

The sagebrush habitat is found primarily in the WWTP property and surrounding area. Representative species include low sagebrush, rabbitbrush, buckbrush, and western juniper. Barren habitat is defined by sparse or absent vegetation. In the study area, barren habitat occurs as graveled roadways and alleyways, and along some road shoulders.

Stream/riverine habitats in and adjacent to the project footprint include the McArthur Diversion Canal, Fall River, several intermittent streams, and roadside and constructed ditches. Riparian habitat occurs intermittently along the banks of the canal and some of the streams. Open water habitat in the project footprint includes the WWTP ponds. The urban, annual grassland, sagebrush, barren, and open water communities are not considered sensitive natural communities, but they may contain small inclusions of sensitive wetland habitats. Potential impacts to natural communities in the project area are described below.

#### ***Temporary Disturbance of Upland Habitats***

The majority of the improvements would involve temporary disturbance of urban, annual grassland, sagebrush, and barren habitat due to trenching required to install sewer pipes. Although none of these communities is considered sensitive and mitigation is not required to offset impacts to these habitats, temporarily disturbed areas would be revegetated upon completion of construction.

#### ***Temporary Disturbance of WWTP Ponds***

The project includes grading in one of the WWTP ponds to install an aeration basin, and installation of aeration system components in the aeration pond. Although this would temporarily impede use of the pond, the pond would continue to support waterfowl and other wildlife species following completion of the improvements, and no mitigation is required.

#### ***Introduction and Spread of Noxious Weeds***

The introduction and spread of noxious weeds during construction activities has the potential to adversely affect sensitive habitats. Each noxious weed identified by the California Department of Agriculture receives a rating which reflects the importance of the pest, the likelihood that eradication or control efforts would be successful and the present distribution of the pest within the state.

Noxious weeds observed in the project area are of widespread distribution in the County, and further spread of these weeds is not anticipated. However, other noxious weeds could be introduced into the project area during construction if construction vehicles are not properly washed before entering the project site. Soil import/export and use of certain erosion-control materials such as straw can also result in the spread of noxious weeds.

As required by **MM 4.4.4**, the potential for introduction and spread of noxious weeds can be avoided/minimized by using only certified weed-free erosion control materials, mulch, and seed; limiting any import or export of fill material to material that is known to be weed free; and requiring the construction contractor to thoroughly wash all construction vehicles and equipment at a commercial wash facility before entering and upon leaving the job site.

### ***Impacts on Wetlands and Other Waters***

ENPLAN conducted field investigations on April 6, May 19, June 23, and July 23, 2022, to identify wetlands and other waters of the U.S. and State in the project area. The field investigations were conducted in accordance with technical methods outlined in the *Corps of Engineers Wetlands Delineation Manual* (U.S. Department of the Army, Corps of Engineers, 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008), and the *Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States*.

As a result of the field delineation effort, wetlands and other water features were identified in and adjacent to the biological survey area, including intermittent streams, wetland swales, constructed ditches, seasonal wetlands, and freshwater ponds (WWTP ponds). These features are shown in relation to the preliminary project footprint in the map exhibits included in **Appendix D**.

As stated under Questions A and B, the biologists were not able to access all areas within the project footprint. **MM 4.4.1** requires that prior to commencement of earth-disturbing activities, the project engineer shall identify all improvements that would occur outside of the surveyed area (see **Appendix C** for survey coverage maps). All areas within the project footprint that were not previously surveyed for biological resources, including wetlands and other waters, shall be surveyed by a qualified biologist. An Aquatic Resources Delineation Report shall be completed and submitted to the USACE for verification.

To the extent feasible, final design of the improvements will avoid direct impacts to wetlands and other waters. However, it is anticipated that the project would temporarily impact wetlands and other waters due to trenching through these features to install the sewer pipes. No permanent impacts to wetlands or other waters are anticipated.

Federal waters are subject to conditions of a CWA Section 404 permit as required by the USACE. The extent of federal jurisdiction will be determined by USACE staff in accordance with the rules that are in effect at the time of jurisdictional determination. It is expected that at least some of the on-site waters would be considered federally regulated.

It is anticipated that the proposed project qualifies for a USACE Nationwide Permit. Among other conditions, the USACE permit requires that temporary fills be removed in their entirety and the affected areas be returned to pre-construction contours to maintain hydrology of the site. In addition, temporarily disturbed areas must be revegetated to minimize erosion, as appropriate.

A project requiring a USACE Section 404 permit is also required to obtain a State Water Quality Certification (or waiver) to ensure that the project will not violate established State water quality standards. If a discharge is proposed to waters outside of federal jurisdiction, the discharge is instead regulated under the State Porter-Cologne Water Quality Control Act through the issuance of Waste Discharge Requirements (WDRs). The extent of State jurisdiction will be determined by CVRWQCB staff in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. A Streambed Alteration Agreement from CDFW may also be required.

**MM 4.4.5** requires that prior to commencement of earth-disturbing activities, exclusionary fencing, flagging, or other markers shall be installed around wetlands and other jurisdictional waters that are to be avoided; the location of the fencing must be verified by a qualified biologist.

### ***Indirect Impacts to Downstream Aquatic Habitats***

As discussed under Question A, if eroded soils are washed into downstream waters, they could directly and indirectly affect aquatic species and habitats. The FRVCS is required to develop a SWPPP that includes BMPs to control erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat.

As documented above, use of BMPs for spill prevention and erosion control, compliance with the conditions of resource agency permits, and implementation of **MM 4.4.1**, **MM 4.4.4**, and **MM 4.4.5** would reduce the project's potential impacts on sensitive natural communities to a ***less-than-significant*** level.

#### Question D

CDFW identifies critical winter ranges for deer  $\pm$  0.5 miles west and  $\pm$  2 miles south of the Country Club Subdivision (CDFW, 2021a). Due to the distance from the proposed improvements, the project would not impact the critical winter ranges.

The majority of work would occur in and adjacent to paved or graveled areas within road ROWs that have minimal potential to serve as wildlife migration corridors. Although a new blower building would be constructed at the WWTP, and fencing may be installed around the new lift stations, wildlife species would be able to alter their routes to move around the building and fences.

Temporary impacts to wildlife could occur due to increased human activity, increased noise levels, and temporary loss of vegetation that may provide food and shelter. In addition, daytime movement of terrestrial wildlife species through the study area may be temporarily affected during construction activities; however, this impact is not significant because it would be temporary and wildlife species would be able to alter their routes to move around the construction areas. There is a slight possibility that wildlife could become trapped in open trenches and pipes during construction. **MM 4.4.6** is included to prevent the inadvertent entrapment of wildlife, reducing the potential impact to ***less than significant***.

#### Question E

As identified under Regulatory Context, the County's General Plan includes goals, objectives, policies, and programs related to the conservation of natural resources. Implementation of **MM 4.4.1** through **MM 4.4.6** and compliance with resource agency permits, including those identified in Section 1.8 (Regulatory Requirements), ensures consistency with local policies that protect biological resources. Therefore, impacts would be ***less than significant***.

#### Question F

A Habitat Conservation Plan (HCP) is a federal planning document that is prepared pursuant to Section 10 of the Federal Endangered Species Act (FESA) when a project results in the "take" of threatened or endangered wildlife. Regional HCPs address the "take" of listed species at a broader scale to avoid the need for project-by-project permitting. A Natural Community Conservation Plan (NCCP) is a state planning document administered by CDFW. There are no HCPs, NCCPs or other habitat conservation plans that apply to the proposed project (CDFW, 2021b; USFWS, 2022); therefore, there would be ***no impact***.

## CUMULATIVE IMPACTS

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Cumulative projects in the site vicinity, including growth resulting from build-out of the Shasta County General Plan, are anticipated to permanently remove plant and wildlife resources. Continued conversion of existing open space to urban development may result in the loss of sensitive plant and wildlife species native to the region, habitats for such species, wetlands, wildlife migration corridors, and nursery sites.

The conversion of plant and wildlife habitat on a regional level as a result of cumulative development would potentially result in a regionally significant cumulative impact on special-status species and their habitats. Implementation of **MM 4.4.1** through **MM 4.4.6**, implementation of BMPs for erosion and sediment control, and compliance with resource agency permit conditions ensures that the project's contribution to cumulative regional impacts is less than significant.

## MITIGATION

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**MM 4.4.1** In conjunction with preparation of improvement plans for the project, the project engineer shall identify all improvements that would occur outside of the area that was surveyed for special-status plants, special-status animals, and wetlands and waters of the U.S. and State (refer to Appendix C, Survey Coverage Maps, of the Initial Study).

All areas within the project footprint that were not previously surveyed shall be surveyed by a qualified biologist. The biologist shall consult with the U.S. Army Corps of Engineers, Central Valley Regional Water Quality Control Board, California Department of Fish and Wildlife, and other applicable agencies to determine required resource agency permits and permit conditions. Any mitigation requirements shall be satisfied prior to commencement of earth-disturbing activities or as otherwise specified in applicable resource agency permits.

**MM 4.4.2** If western pond turtles are observed in the work area, a qualified biologist shall be contacted and construction activities shall be halted within 25 feet of the turtle until the turtle is confirmed to have left the project area or is relocated by a qualified biologist.

**MM 4.4.3** In order to avoid impacts to nesting birds and raptors protected under the federal Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5, including their nests and eggs, one of the following shall be implemented:

- a. Vegetation removal and other ground-disturbance activities associated with construction shall occur between September 1 and January 31 when birds are not nesting; or
- b. If vegetation removal or ground disturbance activities occur during the nesting season (February 1 – August 31), a pre-construction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area.

Surveys shall begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The survey shall take into account acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds. At a minimum, the survey report shall include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed in the area, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.).

The results of the survey shall be submitted electronically to the California Department of Fish and Wildlife at [R1CEQARedding@wildlife.ca.gov](mailto:R1CEQARedding@wildlife.ca.gov) upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

If active nests are found, appropriate actions shall be implemented to ensure compliance with the Migratory Bird Treaty Act and California Fish and Game Code. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

**MM 4.4.4** The potential for introduction and spread of noxious weeds shall be avoided/minimized by:

- a. Using only certified weed-free erosion control materials, mulch, and seed;

- b. Limiting any import or export of fill material to material that is known to be weed free; and
- c. Requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering the job site and upon leaving the job site.

**MM 4.4.5** High-visibility fencing, flagging, or other markers shall be installed along the outer edge of the construction zone adjacent to wetlands and other waters designated for avoidance. The fencing location shall be determined by a qualified biologist in consultation with the project engineer and the Fall River Valley Community Services District. No construction activities (e.g., clearing, grading, trenching, etc.), including vehicle parking and materials stockpiling, shall occur within the fenced area. The exclusionary fencing shall be periodically inspected during construction activities to ensure that the fencing is properly maintained. The fencing shall be removed upon completion of work.

**MM 4.4.6** To prevent the inadvertent entrapment of wildlife, the construction contractor shall ensure that at the end of each workday trenches and other excavations that are over one-foot deep have been backfilled or covered with plywood or other hard material. If backfilling or covering is not feasible, one or more wildlife escape ramps constructed of earth fill or wooden planks shall be installed in the open trench. Pipes shall be inspected for wildlife prior to capping, moving, or placing backfill over the pipes to ensure that animals have not been trapped. If animals have been trapped, they shall be allowed to leave the area unharmed.

## DOCUMENTATION

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## 4.5 CULTURAL RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## REGULATORY CONTEXT

### FEDERAL

#### Section 106 of the National Historic Preservation Act (NHPA)

Section 106 of the NHPA and its implementing regulations require federal agencies to take into account the effects of their activities and programs on historic properties. A historic property is any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places (NRHP), including artifacts, records, and material remains related to such a property (NHPA Sec. 301[5]). A resource is considered eligible for listing in the NRHP if it meets the following criteria as defined in CFR Title 36, §60.4:

*The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:*

- *That are associated with events that have made a significant contribution to the broad patterns of our history;*
- *That are associated with the lives of persons significant in our past;*
- *That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
- *That has yielded, or may be likely to yield, information important to prehistory or history.*

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP. The property must also retain enough integrity to enable it to convey its historic significance. To retain integrity, a property will always possess several, and usually most, of the seven aspects of integrity noted above. If a site is determined to be an eligible or historic property, impacts are assessed in terms of “effects.” An undertaking is considered to have an adverse effect if it results in any of the following:

1. Physical destruction or damage to all or part of the property;
2. Alteration of a property;
3. Removal of the property from its historic location;
4. Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance;
5. Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features; and
6. Neglect of a property that causes its deterioration; and the transfer, lease, or sale of the property.



If a project will adversely affect a historic property, feasible mitigation measures must be incorporated. The State Historic Preservation Officer (SHPO) must be provided an opportunity to review and comment on these measures prior to commencement of the proposed project.

## STATE

### California Environmental Quality Act (CEQA)

CEQA requires that projects financed by or requiring the discretionary approval of public agencies in California be evaluated to determine potential adverse effects on historical and archaeological resources (California Code of Regulations [CCR], §15064.5). Historical resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, or scientific importance. Pursuant to §15064.5 of the CCR, a property may qualify as a historical resource if it meets any of the following criteria:

1. The resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR).
2. The resource is included in a local register of historic resources, as defined in §5020.1(k) of the Public Resources Code (PRC), or is identified as significant in a historical resources survey that meets the requirements of §5024.1(g) of the PRC (unless the preponderance of evidence demonstrates that the resource is not historically or culturally significant).
3. The lead agency determines that the resource may be a historical resource as defined in PRC §5020.1(j), or §5024.1, or may be significant as supported by substantial evidence in light of the whole record. Pursuant to PRC §5024.1, a resource may be eligible for inclusion in the CRHR if it:
  - Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
  - Is associated with the lives of persons important in our past;
  - Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
  - Has yielded, or may be likely to yield, information important in prehistory or history.

Resources must retain integrity to be eligible for listing on the CRHR. Resources that are listed in or formally determined eligible for listing in the NRHP are included in the CRHR, and thus are significant historical resources for the purposes of CEQA (PRC §5024.1(d)(1)). A unique archaeological resource means an artifact, object, or site that 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; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

## LOCAL

### Shasta County

The Shasta County General Plan includes the following Objective and Policy that apply to the proposed project:

#### Chapter 6.10, Heritage Resources

**Objective:** HER-1 Protection of significant prehistoric and historic cultural resources.

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<b>Policy:</b>	HER-a	Development projects in areas of known heritage value shall be designed to minimize degradation of these resources. Where conflicts are unavoidable, mitigation measures which reduce such impacts shall be implemented. Possible mitigation measures may include clustering, buffer or nondisturbance zones, and building siting requirements.
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## DISCUSSION OF IMPACTS

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### Questions A and B

A Cultural Resources Inventory (CRI) was completed for the proposed project by ENPLAN. The study included a records search, Native American consultation, and field evaluation.

#### ***Area of Potential Effects (APE)***

The APE boundaries were devised in consultation with PACE Engineering, based on the project design. The APE includes areas for staging and construction access, as well as sufficient area for construction.

The vertical APE (i.e., associated with the potential for buried cultural resources) is based on the engineering design of the project and reflects the planned depths of the excavations associated with the project. The maximum vertical APE is approximately ten feet.

#### ***Records Search***

The records search included review of records at the Northeast Information Center of the California Historical Resources Information System at California State University, Chico (NEIC/CHRIS); NRHP; CRHR; California Inventory of Historic Resources; California Historical Landmarks; California Points of Historical Interest; Native American Heritage Commission (NAHC); Shasta County Historical Society; and historical maps.

Research was conducted by the NEIC/CHRIS on December 16, 2019, and July 20, 2022, and covered an approximate 1/4-mile radius around the APE for previously recorded historic and prehistoric sites and for previously conducted surveys. The size and scope of the search area was determined to be sufficient based on the results.

The records search indicated that 15 cultural resource surveys have been conducted within a 1/4-mile radius of the project APE, nine of which encompassed portions of the APE. There are 30 previously recorded sites in the 1/4-mile search radius, 27 of which are within the project's APE. All of the recorded sites within the APE are historical-era residences and non-residential buildings. The records search did not identify any additional resources within the APE. Consultation with the Shasta County Historical Society did not identify any additional resources in the project area.

#### ***Native American Consultation***

A Request for a Sacred Lands Search was e-mailed to the Native American Heritage Commission (NAHC) on December 10, 2019, requesting information on the McArthur area. The NAHC responded by e-mail on December 16, 2019, indicating that their files did not identify the presence of Native American sacred sites or cultural resources in the immediate area. Comment solicitation letters were sent by ENPLAN on December 18, 2019, to Natalie Forrest-Perez, Tribal Historic Preservation Officer, Pit River Tribe; Agnes Gonzalez, Chairperson, Pit River Tribe; Charles White, Tribal Administrator, Pit River Tribe; Ignacio Venegas, Ajumawi Council Representative, Ajumawi Band, Pit River Tribe; and Jack Potter, Chairperson, Redding Rancheria, requesting information on known or potential tribal cultural resources in the community of McArthur and surrounding areas.

Follow-up correspondence was conducted on December 31, 2019. A response was received from Ginger Amoroso with the Pit River Tribe on January 29, 2020, stating that the Pit River Tribe has an interest in the project.

Due to an expanded project boundary, a Request for a Sacred Lands Search for the expanded project was e-mailed to the NAHC on August 30, 2022. The NAHC responded by email on October 28, 2022, indicating that their files did not identify the presence of Native American sacred sites or cultural resources in the immediate area. A telephone call was made to Ginger Amorosa with the Pit River Tribe on December 12, 2022. Ms. Amorosa stated that certain areas within the project boundary are sensitive for Native American cultural resources, and she requested that a tribal monitor be present during initial earth-disturbing activities in these locations. No other responses were received from any of the other tribes that were contacted.

### ***Field Evaluation***

Pedestrian field surveys were completed by ENPLAN archaeologists on December 19, 2019, (McArthur area) and August 18, 2022 (remainder of the project area), to identify cultural resources that would be potentially affected by the proposed project.

The entire APE was surveyed with transects spaced 10-15 meters apart. Areas with exposed subsurface soil, including rodent burrows and ditches, were thoroughly inspected for evidence of any possible buried cultural deposits and/or soil differentiation. Some areas on privately owned property were inaccessible during the survey, and so these portions of the APE were viewed from beyond fences and from driveways, alleyways, and public roads. Ground visibility ranged from poor to excellent (25 to 100 percent) throughout the APE. Visibility was primarily constrained due to the presence of low-level vegetation, concrete coverage, graded roads, and gravel fill.

### ***Conclusions***

During the cultural resources surveys conducted by ENPLAN, numerous historical-era residences, non-residential buildings, and a ranch complex were identified in the APE. As described in Section 2.1.2, some of these historical-era buildings have been recorded, three of which appear to be eligible for listing in the NRHP: P-45-003427 (The McArthur Mansion) P-45-003435 (Hiway Garage) and P-45-003437 (McArthur Ranch). Additional historical-era structures that have not been recorded are located throughout the study area.

Subsurface sewer laterals would be installed between the sewer main and the plumbing system of buildings, which would involve trenching on private property and completing plumbing improvements near the foundations of the buildings; however, no modifications to the buildings would be required that would affect their historical integrity.

However, construction work that occurs within the yards of buildings has a potential to affect historical-era features (e.g., historical landscaping, walls, etc.). In addition, some areas on privately owned property were inaccessible during the field surveys, and these portions of the APE will need to be surveyed prior to ground-disturbing activities, based on final design of the project.

Based on the geomorphological and topographic characteristics of the project area, the results of the records and literature search, Native American consultation, and the age of soils mapped in the area, the majority of the project area has a low potential for intact surface and buried historical and prehistoric cultural resources. Some areas in the APE have a low to moderate potential for tribal cultural resources.

**MM 4.5.1** requires that in conjunction with preparation of improvement plans for the project, the project engineer shall identify all improvements that would occur outside of the surveyed area (see **Appendix C** for survey coverage maps). All areas within the project footprint that were not previously surveyed by a qualified archaeologist shall be surveyed to identify potentially significant archaeological and historical resources. If such resources are present, additional evaluation shall be completed by a qualified archaeologist in accordance with the significance criteria set forth in the National Historic Preservation Act and the California Register for Historical Resources. Appropriate mitigation measures recommended by a qualified archaeologist shall be implemented. Potential measures could include avoidance of the resource, site capping (burial), creation of conservation easements, and/or data recovery.

**MM 4.5.2** addresses the inadvertent discovery of cultural resources. **MM 4.5.3** addresses comments expressed by the Pit River Tribe and requires that the tribe be notified a minimum of two weeks in advance of any ground-disturbing activities and offered the opportunity for a tribal monitor to be present. **MM 4.5.4** requires that in the event that cultural resources or human remains of Native American descent are identified during earth disturbance, the Pit River Tribe shall be requested to provide a Native American monitor to observe subsequent earth-disturbing construction activities on potentially sensitive lands. Implementation of **MM 4.5.1** through **MM 4.5.4** ensures that the project would not cause a substantial adverse change in the significance of a historical or archaeological resource; impacts would be *less than significant*.

### Question C

The study area does not include any known cemeteries, burial sites, or human remains. However, it is possible human remains may be unearthed during construction activities. **MM 4.5.5** ensures if human remains are discovered, there shall be no further excavation or disturbance of the site until the County coroner has been contacted and has made the necessary findings as to origin and disposition in accordance with §15064.5(e) of the CEQA Guidelines. As stated under Questions A and B, **MM 4.5.4** requires that if human remains are determined to be of Native American descent, the Pit River Tribe shall be requested to provide a Native American monitor. Therefore, impacts would be *less than significant*.

## CUMULATIVE IMPACTS

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Cumulative projects in the vicinity of the project area have the potential to impact cultural resources. Archaeological and historic resources are afforded special legal protections designed to reduce the cumulative effects of development. Cumulative projects and the proposed project are subject to the protection of cultural resources afforded by the CEQA Guidelines §15064.5 and related provisions of the PRC. In addition, projects with federal involvement would be subject to Section 106 of the NHPA.

Given the non-renewable nature of cultural resources, any impact to protected sites could be considered cumulatively considerable. As documented above, **MM 4.5.1** requires that areas that were not previously evaluated be surveyed by a qualified archaeologist. If it is determined that cultural resources would be adversely affected by the proposed project, mitigation measures recommended by the archaeologist would be implemented. **MM 4.5.2** and **MM 4.5.5** address the inadvertent discovery of cultural resources and human remains. **MM 4.5.3** and **MM 4.5.4** address comments expressed by the Pit River Tribe and require that the tribe be notified prior to ground-disturbing activities and that a monitor be requested if cultural resources or human remains of Native American descent are discovered.

All development projects in the State are subject to the same measures pursuant to PRC §21083.2 and CEQA Guidelines §15064.5. With implementation of **MM 4.5.1** through **MM 4.5.5**, the proposed project's cumulative impact to cultural resources would be less than significant.

## MITIGATION

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**MM 4.5.1** In conjunction with preparation of improvement plans for the project, the project engineer shall identify all improvements that would occur outside of the area that was surveyed for archaeological and historical resources (refer to Appendix C, Survey Coverage Maps, of the Initial Study).

All areas within the project footprint that were not previously surveyed by a qualified archaeologist shall be surveyed to identify potentially significant archaeological and historical resources. If the archaeologist determines that no such resources are present, no further action is required. If such resources are present, additional evaluation shall be completed by a qualified archaeologist in accordance with the significance criteria set forth in the National Historic Preservation Act and the California Register for Historical Resources. Appropriate mitigation measures recommended by the archaeologist shall be implemented. Potential measures may include avoidance of the resource, site capping (burial), recordation of conservation easements, and/or data recovery.



- MM 4.5.2** In the event of any inadvertent discovery of cultural resources (i.e., burnt animal bone, midden soils, projectile points or other humanly modified lithics, historic artifacts, etc.), all work within 50 feet of the find shall be halted until a professional archaeologist can evaluate the significance of the find in accordance with PRC §21083.2(g) and §21084.1, and CEQA Guidelines §15064.5(a). If any find is determined to be significant by the archaeologist, the Fall River Valley Community Services District (CSD) shall meet with the archaeologist to determine the appropriate course of action. If necessary, a Treatment Plan prepared by an archeologist outlining recovery of the resource, analysis, and reporting of the find shall be prepared. The Treatment Plan shall be reviewed and approved by the Fall River Valley CSD prior to resuming construction.
- MM 4.5.3** A minimum of two weeks in advance of any ground-disturbing activities (e.g., clearing, grading, trenching, etc.), the Tribal Historic Preservation Officer of the Pit River Tribe shall be notified and offered the opportunity for a Native American representative to monitor ground-disturbing activities.
- MM 4.5.4** In the event that cultural resources or human remains of Native American descent are identified during earth disturbance, the Pit River Tribe shall be requested to provide a Native American monitor to observe subsequent earth-disturbing construction activities on potentially sensitive lands.
- MM 4.5.5** In the event that human remains are encountered during construction activities, the Fall River Valley CSD shall comply with §15064.5 (e) (1) of the CEQA Guidelines and PRC §7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the County coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the NAHC to identify the most likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed in §15064.5 (e) has been completed.

## DOCUMENTATION

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**ENPLAN.** 2023. Cultural Resources Inventory Report: Fall River Valley Community Services District Wastewater System Expansion Project, Shasta County, California. Confidential document on file at NEIC/CHRIS.

**Shasta County.** 2004. Shasta County General Plan, Chapter 6.10 Heritage Resources. [https://www.shastacounty.gov/sites/default/files/fileattachments/planning/page/3048/6\\_10heritage.pdf](https://www.shastacounty.gov/sites/default/files/fileattachments/planning/page/3048/6_10heritage.pdf). Accessed September 2022.

## 4.6 ENERGY

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### REGULATORY CONTEXT

There are no federal or local regulations pertaining to energy that apply to the proposed project.

#### STATE

##### California Environmental Quality Act (CEQA)

Section 15126.2(b) of the CEQA Guidelines states that if analysis of a project's energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources, the effects must be mitigated. The Guidelines provide suggestions of topics that may be included in the energy analysis, including identification of energy supplies that would serve the project and energy use for all project phases and components. In addition to building code compliance, other relevant considerations may include the project's size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project.

##### Renewables Portfolio Standard

In 2002, SB 1078 was passed to establish the State's Renewables Portfolio Standard (RPS) Program, with the goal of increasing the amount of electricity generated and sold to retail customers from eligible renewable energy resources. The initial goal was to increase the percentage of renewable energy in the State's electricity mix to 20 percent of retail sales by 2017. SB 350 (2015) codified a target of 50 percent renewable energy by 2030, and requires California utilities with an average load greater than 700 GWh to develop integrated resource plans that incorporate a GHG emission reduction planning component beginning January 1, 2019.

##### Senate Bill 100 (2018), The 100 Percent Clean Energy Act

SB 100 (2018) was signed by the Governor on September 10, 2018 and established new standards for the RPS goals established by SB 350 (2015). The new standards established by SB 100 increased previously established RPS goals to now require 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045 for both investor-owned utilities and publicly owned utilities. Interim targets require that energy providers have a renewable energy supply of 44 percent by 2024 and 52 percent by 2027.

##### In-Use Off-Road Diesel-Fueled Fleets Regulation

CARB adopted the In-Use Off-Road Diesel-Fueled Fleets Regulation to reduce NO<sub>x</sub>, diesel particulate matter, and other criteria pollutant emissions from off-road heavy-duty diesel vehicles in California. The regulation covers a wide range of vehicle types, including, but not limited to, vehicles used in construction, mining, industrial operations, and other industries. The Regulation requires that fleets meet an increasingly stringent set of fleet average targets, culminating in 2023 for large and medium fleets, and in 2028 for small fleets. The most stringent fleet average target generally corresponds to a 2012 model year, or a Tier 3 average standard (CARB, 2022c).

All self-propelled off-road diesel vehicles 25 horsepower (HP) or greater used in California and most two-engine vehicles (except on-road two-engine sweepers) are subject to the regulation, including rented and leased vehicles. The regulation imposes limits on idling, restricts adding older vehicles into fleets, and requires that fleet owners reduce their emissions by retiring, replacing, repowering, or retrofitting older engines. In addition, the Portable Equipment Registration Program (PERP) requires all portable engines 50 HP or greater to be registered in PERP or be permitted by a local air district.

The regulations were most recently updated on November 17, 2022, and require fleets to phase-out use of the oldest and highest polluting off-road diesel vehicles in California earlier or beyond what is required of fleets in the Off-Road Regulation. The updated regulations also prohibit the addition of high-emitting vehicles to a fleet and require the use of renewable diesel (99 or 100 percent renewable) in off-road diesel vehicles. The amended regulations will be phased in starting in 2024 through the end of 2036 (CARB, 2022d, 2022e).

The amended regulations require that beginning January 1, 2024, public agencies that award or enter into contracts for public works projects obtain fleet Certificates of Reported Compliance from fleets prior to awarding public works contracts. These requirements will ensure that only compliant fleets are being used on public works projects. CARB estimates that from 2024 through 2038, the amendments will generate an additional reduction above and beyond the current regulation of approximately 31,087 tons of NO<sub>x</sub> and 2,717 tons of PM<sub>2.5</sub>. About half of those additional reductions are expected to be realized within the first five years of implementation.

### **California Building Standards Code**

Title 24 of the CCR, also known as the California Building Standards Code (CBSC), is based on the International Building Code used widely throughout the country. The CBSC has been modified for California conditions to include more detailed and/or more stringent regulations. The CBSC consists of 13 parts, including the California Building Code, Energy Code, and Green Building Standards Code.

The California Energy Code (Part 6 of the CBSC), also known as the State's Energy Efficiency Standards, was established by the California Building Standards Commission in 1978 with a goal of reducing California's energy consumption for residential and nonresidential buildings. The Standards include mandatory measures related to building envelopes, mechanical systems, indoor and outdoor lighting, and electrical power distribution.

The California Green Building Code (CALGreen Code) requires new residential and commercial buildings to comply with mandatory measures related to planning and design, energy efficiency, water efficiency/conservation, material conservation, resource efficiency, and environmental quality. Although it was adopted as part of the State's efforts to reduce GHG emissions, the CALGreen Code has the added benefit of reducing energy consumption from residential and nonresidential buildings that are subject to the Code.

## **DISCUSSION OF IMPACTS**

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### **Questions A and B**

Energy consumption during construction would occur primarily from the use of diesel and gasoline in construction equipment and haul trucks, as well as in vehicles used by construction workers travelling to and from the work site.

As stated under Regulatory Context, the In-Use Off-Road Diesel-Fueled Fleets Regulation applies to off-road heavy-duty diesel vehicles in California, including vehicles used in construction. The regulation imposes limits on idling, restricts adding older vehicles into fleets, and requires that fleet owners reduce their emissions by retiring, replacing, repowering, or retrofitting older engines.

Additional requirements, including the requirement to use renewable diesel fuel in off-road diesel vehicles, will be phased in starting in 2024 through the end of 2036 (CARB, 2022d, 2022e). As discussed in Section 4.3 (Air Quality), **MM 4.3.2** is included to minimize NO<sub>x</sub> emissions and would

also reduce energy use during construction. All diesel-fueled construction equipment including but not limited to rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors, must meet or exceed California Air Resources Board (CARB) Tier 4 final off-road emissions standards. If more stringent requirements are in place at the time of construction, the most stringent requirements shall apply. In addition, alternatively-fueled construction equipment shall be used, where feasible (e.g., compressed natural gas (CNG), liquefied natural gas (LNG), propane, biodiesel, or advanced technologies that do not rely on diesel fuel). Therefore, impacts during construction would be less than significant.

Project components that would result in a permanent increase in energy use include the new aeration system at the WWTP and the two new lift stations in McArthur. Electricity for the proposed project would be provided by PG&E. As stated under Regulatory Context, the new standards established by SB 100 (2018) require 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045 for both investor-owned utilities and publicly owned utilities. In addition, National Electrical Manufacturers Association (NEMA) premium-efficiency motors will be installed to maximize energy efficiency, and the project must comply with the California Building Code, Energy Code, CALGreen, and other applicable State building codes related to energy efficiency.

The extension of sewer service to McArthur would increase flows to LS 2, which would require higher capacity pumps to be installed, thereby increasing energy demand. However, old inefficient pumps, motors, controls, and other miscellaneous equipment at all three of the existing lift stations would be replaced with NEMA premium motors and energy-efficient equipment, resulting in a corresponding decrease in energy use. As stated in Section 3.2 (Project Components/Physical Improvements), properties along SR 299 that front the 6-inch-diameter force main would connect to the force main by installing a new septic tank effluent pump (STEP) system inside the existing septic tank and installing a small-diameter force main from the septic tank to the 6-inch-diameter force main in SR 299. Operation of the STEP system would require a small pump to be installed at existing septic tanks resulting in a small increase in energy consumption.

The use of fuel-efficient equipment during construction, the use of energy-efficient motors, pumps, and equipment, and compliance with State building codes ensures that energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary, and that the project would not conflict with or obstruct a state or local plan for renewable energy or energy deficiency. Impacts associated with energy use would be ***less than significant***.

## **CUMULATIVE IMPACTS**

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Completion of the proposed project and other potential cumulative projects in the region, including growth resulting from build-out of the Shasta County General Plan, could result in potentially significant impacts due to the wasteful, inefficient, or unnecessary consumption of energy resources. However, all new development projects in the State are required to comply with State building codes that address energy-efficiency and State regulations that require the use of fuel-efficient equipment during construction. Compliance with State regulations and replacement of old inefficient pumps, motors, and equipment with new, energy-efficient pumps, motors, and equipment, ensures that the proposed project's cumulative impacts on energy resources would be less than significant.

## **MITIGATION**

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None necessary.

## **DOCUMENTATION**

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**California Air Resources Board.** n.d. In-Use Off-Road Diesel-Fueled Fleets Regulation. <https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation>. Accessed July 2022.

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<https://www.arb.ca.gov/planning/sip/2016sip/2016mobsrsrc.pdf>. Accessed May 2022.

United States Environmental Protection Agency. 2002.

<https://www.epa.gov/sites/default/files/2015-06/documents/presewer.pdf>. Accessed May 2022.

## 4.7 GEOLOGY AND SOILS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## REGULATORY CONTEXT

### FEDERAL

#### National Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction Act (NEHRA) was passed in 1977 to reduce the risks to life and property from future earthquakes in the United States. The Act established the National Earthquake Hazards Reduction Program, which was most recently amended in 2004. The Federal Emergency Management Agency (FEMA) is designated as the lead agency of the program. Other NEHR Act agencies include the National Institute of Standards and Technology, National Science Foundation, and the U.S. Geological Survey (USGS).



## **Paleontological Resources Preservation Act**

The federal Paleontological Resources Preservation Act of 2002 limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained federal and/or state agency permits and agree to donate any recovered materials to recognized public institutions, where they will remain accessible to the public and to other researchers. The Act incorporates key findings of a report, *Fossils on Federal Land and Indian Lands*, issued by the Secretary of the Interior in 2000, that established that most vertebrate fossils and some invertebrate and plant fossils are considered rare resources.

## **STATE**

### **California Alquist-Priolo Earthquake Fault Zoning Act**

The Alquist-Priolo Earthquake Fault Zoning Act (PRC §2621 *et seq.*) was passed in 1972 to reduce the risk to life and property from surface faulting in California. The Act prohibits the siting of most structures intended for human occupancy on the surface trace of Holocene age active faults. Before a project can be permitted in a designated Alquist-Priolo Fault Study Zone, a geologic investigation must be prepared to demonstrate that proposed buildings would not be constructed across active faults.

### **California Seismic Hazards Mapping Act**

The California Seismic Hazards Mapping Act (SHMA) of 1990 (PRC §2690–2699.6) addresses non-surface fault rupture earthquake hazards, including strong ground shaking, liquefaction, and seismically induced landslides. The SHMA also addresses expansive soils, settlement, and slope stability. Under the SHMA, cities and counties may withhold development permits for sites within seismic hazard areas until geologic/geotechnical investigations have been completed and measures to reduce potential damage have been incorporated into development plans.

### **California Building Standards Code**

Title 24 of the CCR, also known as the California Building Standards Code (CBSC), provides minimum standards for building design and construction, including excavation, seismic design, drainage, and erosion control. The CBSC is based on the International Building Code used widely throughout the country. The CBSC has been modified for California conditions to include more detailed and/or more stringent regulations.

### **Protection of Paleontological Resources**

Under CEQA, a project is considered to have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature. In addition, Public Resources Code (PRC) Section 5097.5 provides for the protection of paleontological resources. Local agencies are required to comply with PRC 5097.5 when the agency has discretionary authority over a project undertaken by others (e.g., issuance of use permits, grading permits, etc.).

## **LOCAL**

### **Shasta County**

The Shasta County General Plan includes the following Objectives and Policies that apply to the proposed project:

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#### **Chapter 5.1, Seismic and Geologic Hazards**

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<b>Objectives:</b>	SG-1	Protection of all development from seismic hazards by developing standards for the location of development relative to these hazards; and protection of essential or critical structures, such as schools, public meeting facilities, emergency services, high-rise and high-density structures, by developing standards appropriate for such protection.
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	SG-2	Protection of development on unstable slopes by developing standards for the location of development relative to these hazards.
	SG-3	Protection of development from other geologic hazards, such as volcanoes, erosion, and expansive soils.
	SG-4	Protection of waterways from adverse water quality impacts caused by development on highly erodible soils.
<b>Policies:</b>	SG-e	When soil tests reveal the presence of expansive soils, engineering design measures designed to eliminate or mitigate their impacts shall be employed.

## DISCUSSION OF IMPACTS

### Question A

#### i and ii)

The California Geologic Survey (CGS) identifies one Alquist Priolo Study Zone (McArthur Fault Zone) and one potentially active fault in the Hat Creek Fault Zone in the project area (CGS 2022a; CGS, 2022b). These faults are described below.

#### **McArthur Fault Zone**

As shown in **Figure 4.7-1**, a portion of the McArthur fault bisects the northeastern extent of the study area. This fault is about 37 miles long with scarps up to 820 feet high. The fault extends to the north across and along the east side of Big Lake. According to a report by the California Division of Mines and Geology, the segment of the McArthur fault in the project site has been active in Holocene time (Wills, 1990).

#### **Hat Creek Fault Zone**

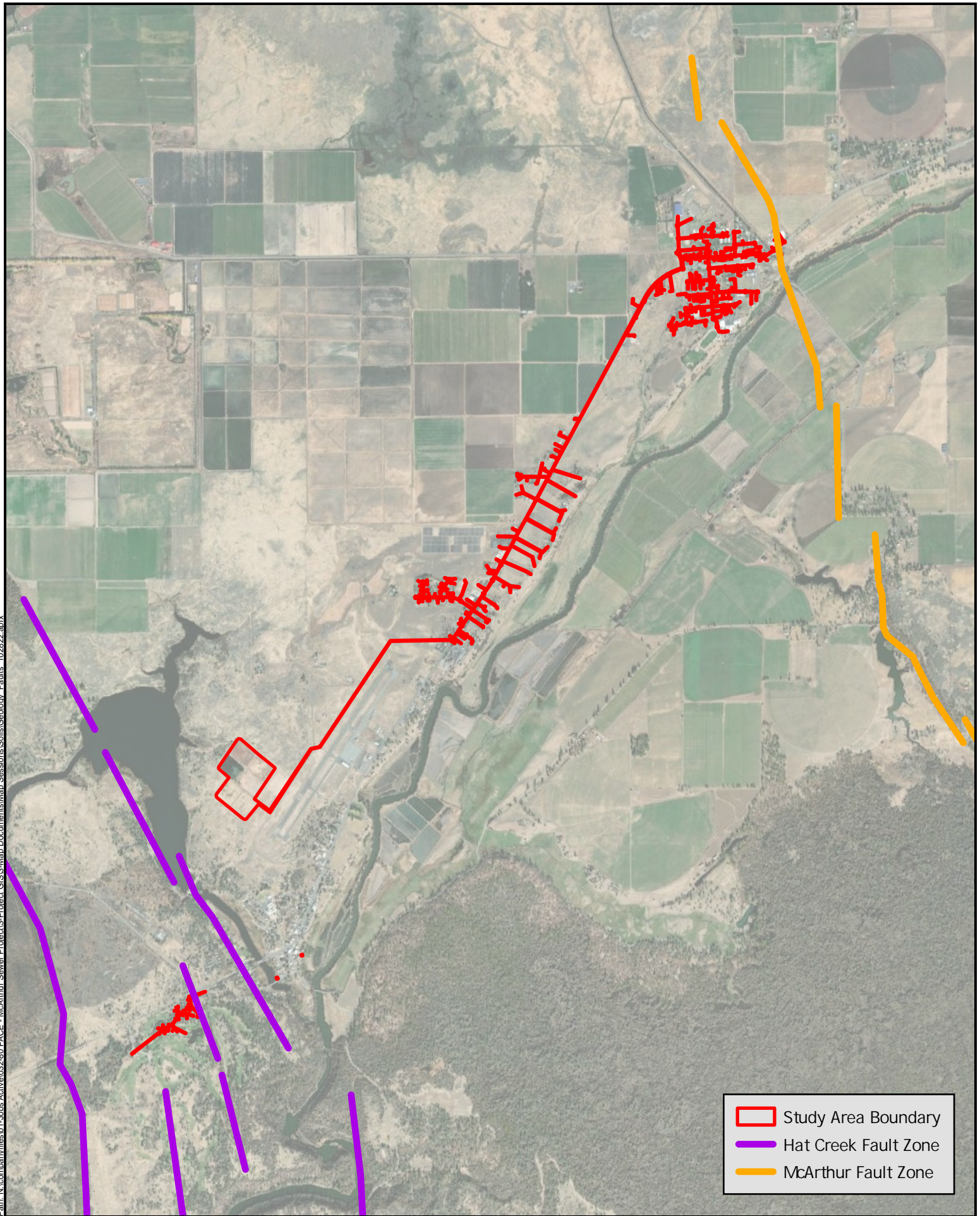
As shown in **Figure 4.7-1**, a fault in the Hat Creek Fault Zone bisects the southern extent of the study area near the County Club Subdivision. This fault is identified as a potentially active Quaternary-age fault (CGS, 2022a).




The proposed project would include installation of sewer lines within the Holocene-active McArthur fault zone and the potentially active Hat Creek fault zone.

The project does not include any components that would increase the likelihood of a seismic event or increase the exposure of people to risks associated with a seismic event; however, if not properly designed, project components are susceptible to seismic-related damage.

In accordance with standard engineering practices, a geotechnical study will be completed for the proposed project. The study will include an evaluation of physical and engineering properties of the subsurface soils, and engineering analysis of potential geologic hazards (i.e., seismic hazards, landslides, liquefaction, settlement, expansive soils, etc.).

The project would be designed in accordance with USGS Seismic Design Maps, California Building Code seismic design specifications, and/or other applicable seismic design standards, and site-specific recommendations for project design, construction methods, and geotechnical monitoring during construction would be implemented as recommended in the geotechnical report. Further, plans would be prepared by a registered professional engineer to ensure that the project is designed to withstand seismic activity. Therefore, impacts would be **less than significant**.



	Study Area Boundary
	Hat Creek Fault Zone
	McArthur Fault Zone

  Feet  
0 3,000

Figure 4.7-1  
**Earthquake Faults**

All depictions are approximate. Not a survey product. 02.07.23



iii)

Liquefaction results from an applied stress on the soil, such as earthquake shaking or other sudden change in stress condition, and is primarily associated with saturated, cohesionless soil layers located close to the ground surface. During liquefaction, soils lose strength and ground failure may occur. Building foundations can sink, break apart, or tilt, and gravity-fed pipelines can back up. This is most likely to occur in alluvial (geologically recent, unconsolidated sediments) and stream channel deposits, especially when the groundwater table is high.

Soil types in the study area are described in **Table 4.7-1**. It is possible that liquefaction could occur in some areas due to soil type; however, as stated under Question A (i and ii), a geotechnical study will be completed for the proposed project to identify any areas with a potential for liquefaction, and recommended measures to minimize the potential for liquefaction would be incorporated as necessary. With implementation of recommendations identified in the geotechnical report, the potential for liquefaction would be **less than significant**.

**TABLE 4.7-1  
Soil Types and Characteristics**

Soil Name	Acres in Study Area	Landform and Parent Material	Depth to Weathered Bedrock	Depth to Water Table	Erosion Potential	Shrink-Swell Potential
Dudgen-Graven complex, 0 to 5 percent slopes	23.4	Stream terraces; alluvium derived from igneous rock	20-40 inches	36-48 inches	Low	Moderate
Esperanza loam, 0 to 2 percent slopes	11.7	Stream terraces; alluvium from tuff, basalt, and diatomaceous earth	Over 60 inches	Over 80 inches	Low	Moderate
Jellycamp-Ollierivas complex, 2 to 9 percent slopes	2.6	Hillslopes; alluvium derived from igneous rock	30-50 inches	Over 80 inches	Low to Moderate	Moderate
Pittville sandy loam 0 to 5 percent slopes	13.8	Stream terraces; alluvium from extrusive igneous rock	Over 60 inches	Over 80 inches	Low	Low
Pittville sandy loam, 15 to 30 percent slopes	0.5	Stream terraces; alluvium from extrusive igneous rock	Over 80 inches	Over 80 inches	High	Low

Sources: U.S. Department of Agriculture, Natural Resources Conservation Service, 2022; USDA, Soil Conservation Service and Forest Service, Soil Survey of Intermountain Area, California, Parts of Lassen, Modoc, Shasta, and Siskiyou Counties, 2000.

iv)

According to the 2017 Shasta County Multi-Jurisdictional Hazard Mitigation Plan, landslides occur throughout Shasta County but are more prevalent in the eastern and northern portions of the County and are commonly related to the sedimentary and volcanic rocks in these vicinities. Landslides are more likely to occur in loosely consolidated wet soil, and in steep areas with weak rocks.

According to the CGS (2022c), the majority of improvements would occur in areas underlain by sedimentary rocks. The southwestern project area near the Country Club Subdivision is underlain by Quaternary volcanic flow rocks. Combined with a moderate potential for seismic activity, there is a potential for landslides to occur in the general project area; however, the project does not include installation of improvements in or adjacent to steep areas in which landslides are more likely to occur. Any areas within the project site with a potential for landslide hazards would be identified during completion of the geotechnical study. If necessary, recommendations to minimize impacts from landslides would be identified in the geotechnical report and incorporated into the improvement plans for the project. Therefore, potential impacts associated with landslides would be **less than significant**.

## Question B

Construction of the proposed project would involve excavation, grading activities, and installation of project components, which would result in the temporary disturbance of soil and would expose disturbed areas to potential storm events. This could generate accelerated runoff, localized erosion, and sedimentation. In addition, construction activities could expose soil to wind erosion that could adversely affect on-site soils and the revegetation potential of the area.

As noted in Section 1.8 (Regulatory Requirements), the FRVCS D is required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) permit for *Discharges of Storm Water Runoff Associated with Construction Activity* by submitting a Notice of Intent to the SWRCB. The permitting process requires the development and implementation of an effective SWPPP that includes BMPs to reduce pollutants as well as any additional controls necessary to meet water quality standards. Measures that may be implemented to minimize erosion include, but are not limited to, limiting construction to the dry season; use of straw wattles, silt fences, and/or gravel berms to prevent sediment from discharging off-site; and revegetating temporarily disturbed sites upon completion of construction. Because BMPs for erosion and sediment control would be implemented in accordance with existing requirements, the potential for soil erosion and loss of top soil would be ***less than significant***.

## Questions C and D

See discussion under Question A(iii) and (iv) and Question B above. Unstable soils consist of loose or soft deposits of sands, silts, and clays. Some soils have a potential to swell when they absorb water and shrink when they dry out. These expansive soils generally contain clays that expand when moisture is absorbed into the crystal structure.

When soils are unstable, they can shift or expand, resulting in damage to structures and/or underground utilities. When expansive soils swell, the change in volume can exert pressure on loads that are upon them. As shown in **Table 4.7-1**, none of the soils in the project area have a high shrink-swell potential; however, as stated under Questions A(iii) and (iv), any areas within the project site with unstable and/or expansive soils would be identified during completion of the geotechnical study. If necessary, recommendations to minimize impacts would be identified in the geotechnical report and incorporated into the improvement plans for the project. Therefore, potential impacts associated with unstable or expansive soils would be ***less than significant***.

## Question E

The proposed project would extend the FRVCS D wastewater collection system to areas currently served by private septic systems. Developed properties would be connected to the public sewer system, and existing septic systems would be abandoned in accordance with Shasta County Environmental Health Department (SCEHD) requirements. The project does not include installation of any new septic tanks or alternative wastewater disposal systems; therefore, there would be ***no impact*** associated with the capability of soils to support such systems.

## Question F

Paleontological resources include fossils and the deposits that contain fossils. Fossils are evidence of ancient life preserved in sediments and rock, such as the remains of animals, animal tracks, plants, and other organisms. Fossils are found primarily embedded in sedimentary rocks, mostly shale, limestone, and sandstone. With rare exceptions, metamorphic and igneous rocks have undergone too much heat and pressure to preserve fossils; however, when ash from volcanic eruptions buries the surrounding area, the ash sometimes encapsulates organisms.

A review of U.C. Berkeley Museum of Paleontology records showed that there are 826 sites in Shasta County in which paleontological resources have been discovered; within these sites, 11,054 fossils have been recorded in the County; however, specific locations of these specimens are not disclosed. According to the CGS, the southwestern extent of the study area, including the Country Club Subdivision and areas to the south, consists of Quaternary volcanic flow rocks with minor pyroclastic deposits. The geology of the remainder of the project area consists of Pleistocene-Holocene age marine and nonmarine (continental) sedimentary rocks. Because paleontological resources and



fossils are found primarily within sedimentary rock deposits, fossilized paleontological resources may be present in the project area. **MM 4.7.1** addresses the inadvertent discovery of paleontological resources during ground-disturbing activities and ensures that impacts would be **less than significant**.

## CUMULATIVE IMPACTS

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Completion of the proposed project and other potential cumulative projects in the region could result in increased erosion and soil hazards and could expose additional structures and people to seismic hazards. In addition, ground disturbance has the potential to destroy paleontological resources and unique geological features.

As discussed above, all development projects in the State that result in earth disturbance over one acre are required to obtain coverage under the NPDES permit for *Discharges of Storm Water Runoff Associated with Construction Activity* by submitting a Notice of Intent to the SWRCB along with an effective SWPPP that includes BMPs to minimize erosion. In addition, pursuant to existing State regulations, incorporation of standard seismic safety and engineering design measures as recommended in a geotechnical study is required. Incorporation of recommendations identified in the geotechnical report, implementation of BMPs in accordance with the SWPPP, and implementation of **MM 4.7.1** ensures that the project's impacts associated with geology and soils are not cumulatively considerable.

## MITIGATION

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**MM 4.7.1** If paleontological resources (fossils) are discovered during construction, all work within a 50-foot radius of the find shall be halted until a professional paleontologist can evaluate the significance of the find. If any find is determined to be significant by the paleontologist, Fall River Valley Community Services District (FRVCS) representatives shall meet with the paleontologist to determine the appropriate course of action. If necessary, a Treatment Plan prepared by a paleontologist outlining recovery of the resource, analysis, and reporting of the find shall be prepared. The Treatment Plan shall be reviewed and approved by FRVCS prior to resuming construction.

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## 4.8 GREENHOUSE GAS EMISSIONS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## REGULATORY CONTEXT

### FEDERAL

#### U.S. Environmental Protection Agency

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gas emissions (GHGs) are air pollutants covered by the federal Clean Air Act (CAA). In reaching its decision, the Court also acknowledged that climate change is caused, in part, by human activities. The Supreme Court’s ruling paved the way for the regulation of GHG emissions by the USEPA under the CAA. The USEPA has enacted regulations that address GHG emissions, including, but not limited to, mandatory GHG reporting requirements, carbon pollution standards for power plants, and air pollution standards for oil and natural gas production.

### STATE

#### California Executive Order (EO) S-3-05

EO S-03-05 was signed by the Governor on June 1, 2005, and established the goal of reducing statewide GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

#### Assembly Bill 32 (Global Warming Solutions Act of 2006)

As required by Assembly Bill 32 (AB 32) (2006), CARB adopted the initial Climate Change Scoping Plan in 2008 that identified the State’s strategy to achieve the 2020 GHG emissions limit via regulations, market-based mechanisms, and other actions. AB 32 requires that the Scoping Plan be updated every five years. CARB’s first update to the Climate Change Scoping Plan (2014) addressed post-2020 goals and identified the need for a 2030 mid-term target to establish a continuum of actions to maintain and

continue reductions. Executive Order B-30-15 (2015) extended the goal of AB 32 and set a GHG reduction goal of 40 percent below 1990 levels by 2030. In December 2017, CARB adopted the second update to the Scoping Plan that includes strategies to achieve the 2030 mid-term target and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

The 2017 Scoping Plan Update recommends that local governments aim to achieve a community-wide goal of no more than 6 metric tons (MT) CO<sub>2</sub> equivalent (CO<sub>2</sub>e) units per capita by 2030 and no more than 2 MT CO<sub>2</sub>e per capita by 2050, which is consistent with the State's long-term goals.

### **California Executive Order B-55-18**

EO B-55-18 was issued by the Governor on September 10, 2018. It sets a statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets.

### **2022 Scoping Plan for Achieving Carbon Neutrality**

On November 16, 2022, the 2022 Scoping Plan for Achieving Carbon Neutrality was published by CARB. The Plan lays out the sector-by-sector plan that outlines a technologically feasible, cost-effective, and equity-focused path to achieve the State's climate target. The 2022 Plan extends and expands upon earlier plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045, and also outlines how carbon neutrality can be achieved by meeting the anthropogenic emissions target and by expanding actions to capture and store carbon through the State's natural and working lands and implementing mechanical approaches (e.g., capture at point sources and direct removal from the atmosphere through direct air capture).

### **Senate Bill 32/Assembly Bill 197 (2016)**

As set forth in EO B-30-15, SB 32 requires CARB to reduce GHG emissions to 40 percent below the 1990 levels by 2030. AB 197 requires CARB to prioritize direct GHG emission reductions in a manner that benefits the state's most disadvantaged communities and to consider social costs when adopting regulations to reduce GHG emissions.

### **Renewables Portfolio Standard**

In 2002, SB 1078 was passed to establish the State's Renewables Portfolio Standard (RPS) Program, with the goal of increasing the amount of electricity generated and sold to retail customers from eligible renewable energy resources. The initial goal was to increase the percentage of renewable energy in the State's electricity mix to 20 percent of retail sales by 2017. SB 350 (2015) codified a target of 50 percent renewable energy by 2030, and requires California utilities with an average load greater than 700 GWh to develop integrated resource plans that incorporate a GHG emission reduction planning component beginning January 1, 2019.

### **Senate Bill 100 (2018), The 100 Percent Clean Energy Act**

SB 100 (2018) was signed by the Governor on September 10, 2018, and established new standards for the RPS goals established by SB 350 (2015). The new standards established by SB 100 increased previously established RPS goals to now require 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045 for both investor-owned utilities and publicly owned utilities. Interim targets require that energy providers have a renewable energy supply of 44 percent by 2024 and 52 percent by 2027.

### **Senate Bill 375 (Sustainable Communities and Climate Protection Act of 2008)**

Under SB 375, the CARB sets regional targets for the reduction of GHG emissions from passenger vehicles and light duty trucks. Each Metropolitan Planning Organization (MPO) in the State, or Regional Transportation Planning Agency for regions without a MPO, must include a Sustainable Communities Strategy (SCS) in the applicable Regional Transportation Plan (RTP) that demonstrates how the region will meet the GHG emissions reduction targets.

## **Mobile Source Strategy**

CARB's 2020 Mobile Source Strategy (Strategy), describes the State's strategy for containing air pollutant emissions from vehicles, and quantifies growth in vehicle miles traveled that is compatible with achieving state climate targets. The Strategy demonstrates how the State can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risks from transportation emissions, and reduce petroleum consumption over the next fifteen years.

## **In-Use Off-Road Diesel-Fueled Fleets Regulation**

CARB adopted the In-Use Off-Road Diesel-Fueled Fleets Regulation to reduce NO<sub>x</sub>, diesel particulate matter, and other criteria pollutant emissions from off-road heavy-duty diesel vehicles in California. The regulation covers a wide range of vehicle types, including, but not limited to, vehicles used in construction, mining, industrial operations, and other industries. The Regulation requires that fleets meet an increasingly stringent set of fleet average targets, culminating in 2023 for large and medium fleets, and in 2028 for small fleets. The most stringent fleet average target generally corresponds to a 2012 model year, or a Tier 3 average standard (CARB, 2022c).

All self-propelled off-road diesel vehicles 25 horsepower (HP) or greater used in California and most two-engine vehicles (except on-road two-engine sweepers) are subject to the regulation, including rented and leased vehicles. The regulation imposes limits on idling, restricts adding older vehicles into fleets, and requires fleet owners to reduce their emissions by retiring, replacing, repowering, or retrofitting older engines. In addition, the Portable Equipment Registration Program (PERP) requires all portable engines 50 HP or greater to be registered in PERP or be permitted by a local air district.

The regulations were most recently updated on November 17, 2022, and require fleets to phase-out use of the oldest and highest polluting off-road diesel vehicles in California earlier or beyond what is required of fleets in the Off-Road Regulation. The updated regulations also prohibit the addition of high-emitting vehicles to a fleet and require the use of renewable diesel (99 or 100 percent renewable) in off-road diesel vehicles. The amended regulations will be phased in starting in 2024 through the end of 2036 (CARB, 2022d, 2022e).

The amended regulations require that beginning January 1, 2024, public agencies that award or enter into contracts for public works projects obtain fleet Certificates of Reported Compliance from fleets prior to awarding public works contracts. These requirements will ensure that only compliant fleets are being used on public works projects.

CARB estimates that from 2024 through 2038, the amendments will generate an additional reduction above and beyond the current regulation of approximately 31,087 tons of NO<sub>x</sub> and 2,717 tons of PM<sub>2.5</sub>. About half of those additional reductions are expected to be realized within the first five years of implementation.

## **Warren-Alquist Act (1974)**

The Warren-Alquist Act established the California Energy Resources Conservation and Development Commission (California Energy Commission) in 1974 to respond to the energy crisis of the early 1970s and the State's unsustainable growing demand for energy resources. The Act established State policy focused on reducing the wasteful, unnecessary, and uneconomical uses of energy by employing a range of measures. The Act is regularly updated, and the Energy Commission publishes an updated version of the Act annually (CEC, 2022).

## **CEQA Guidelines**

§15064.4 of the California Environmental Quality Act (CEQA) Guidelines states that the lead agency should focus its GHG emissions analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A lead agency has the discretion to determine whether to use a model or methodology to quantify GHG emissions or to rely on a qualitative or performance-based standard.

The GHG analysis should consider: 1) the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting, 2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project, and 3) the extent to which the project complies with any regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an Environmental Impact Report (EIR) must be prepared for the project. To determine transportation-generated greenhouse gas emissions in particular, lead agencies may determine that it is appropriate to use the same method used to determine the transportation impacts associated with a project's vehicle miles travelled (VMT).

In *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4<sup>th</sup> 204, which involved the Newhall Ranch project, the California Supreme Court concluded that a legally appropriate approach to assessing the significance of GHG emissions was to determine whether a project was consistent with “‘performance based standards’ adopted to fulfill ‘a statewide . . . plan for the reduction or mitigation of greenhouse gas emissions’ (CEQA Guidelines §15064.4(a)(2), (b)(3)... §15064(h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including ‘plans or regulations for the reduction of greenhouse gas emissions’].” (62 Cal.4th at p. 229.)

**Greenhouse Gases Defined**

Table 4.8-1 provides descriptions of the GHGs identified in California Health and Safety Code §38505(g).

**TABLE 4.8-1  
Greenhouse Gases**

Greenhouse Gas	Description
Carbon dioxide (CO <sub>2</sub> )	Carbon dioxide (CO <sub>2</sub> ) is the primary greenhouse gas emitted through human activities. In 2014, CO <sub>2</sub> accounted for about 80.9 percent of all U.S. greenhouse gas emissions from human activities. The main human activity that emits CO <sub>2</sub> is the combustion of fossil fuels (coal, natural gas, and oil) for energy and transportation, although certain industrial processes and land-use changes also emit CO <sub>2</sub> .
Methane (CH <sub>4</sub> )	Methane (CH <sub>4</sub> ) is the second most prevalent greenhouse gas emitted in the United States from human activities. Methane is emitted by natural sources such as wetlands, as well as human activities such as the raising of livestock; the production, refinement, transportation, and storage of natural gas; methane in landfills as waste decomposes; and in the treatment of wastewater.
Nitrous oxide (N <sub>2</sub> O)	In 2014, nitrous oxide (N <sub>2</sub> O) accounted for about 6 percent of all U.S. greenhouse gas emissions from human activities. Nitrous oxide is naturally present in the atmosphere as part of the Earth's nitrogen cycle. Human activities such as agricultural soil management (adding nitrogen to soil through use of synthetic fertilizers), fossil fuel combustion, wastewater management, and industrial processes are also increasing the amount of N <sub>2</sub> O in the atmosphere.
Hydrofluorocarbons (HFCs)	Hydrofluorocarbons (HFCs) are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products such as refrigerants, aerosol propellants, solvents, and fire retardants. They are released into the atmosphere through leaks, servicing, and disposal of equipment in which they are used.



Greenhouse Gas	Description
Perfluorocarbons (PFCs)	Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF <sub>4</sub> ), perfluoroethane (C <sub>2</sub> F <sub>6</sub> ), perfluoropropane (C <sub>3</sub> F <sub>8</sub> ), perfluorobutane (C <sub>4</sub> F <sub>10</sub> ), perfluorocyclobutane (C <sub>4</sub> F <sub>8</sub> ), perfluoropentane (C <sub>5</sub> F <sub>12</sub> ), and perfluorohexane (C <sub>6</sub> F <sub>14</sub> ). Perfluorocarbons are produced as a byproduct of various industrial processes associated with aluminum production and the manufacturing of semiconductors.
Sulfur hexafluoride (SF <sub>6</sub> )	Sulfur hexafluoride (SF <sub>6</sub> ) is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF <sub>6</sub> is primarily used in magnesium processing and as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF <sub>6</sub> produced worldwide.
Nitrogen trifluoride (NF <sub>3</sub> )	Nitrogen trifluoride is a colorless, odorless, nonflammable gas that is highly toxic by inhalation. It is one of several gases used in the manufacture of liquid crystal flat-panel displays, thin-film photovoltaic cells and microcircuits.

## LOCAL

### Shasta County

Shasta County developed a draft Shasta Regional Climate Action Plan in August 2012 (RCAP). The RCAP includes GHG inventories and projections for each jurisdiction in Shasta County for 2008, 2020, 2035, and 2050. The plan also shows that the County would achieve a reduction in GHG emissions in the year 2020 below 2008 business as usual emissions with the implementation of state and federal reduction measures. However, the County has not adopted thresholds of significance for GHGs.

## DISCUSSION OF IMPACTS

### Question A

Gases that trap heat in the atmosphere create a greenhouse effect that results in global warming and climate change. These gases are referred to as greenhouse gases (GHGs). As described in **Table 4.8-1**, some GHGs occur both naturally and as a result of human activities, and some GHGs are exclusively the result of human activities.

The atmospheric lifetime of each GHG reflects how long the gas stays in the atmosphere before natural processes (e.g., chemical reactions) remove it. A gas with a long lifetime can exert more warming influence than a gas with a short lifetime. In addition, different GHGs have different effects on the atmosphere. For this reason, each GHG is assigned a global warming potential (GWP) which is a measure of the heat-trapping potential of each gas over a specified period of time.

Gases with a higher GWP absorb more heat than gases with a lower GWP, and thus have a greater effect on global warming and climate change. The GWP metric is used to convert all GHGs into CO<sub>2</sub>e units, which allows policy makers to compare impacts of GHG emissions on an equal basis. The GWPs and atmospheric lifetimes for each GHG are shown in **Table 4.8-2**.

**TABLE 4.8-2**  
**Greenhouse Gases: Global Warming Potential and Atmospheric Lifetime**

GHG	GWP (100-year time horizon)	Atmospheric Lifetime (years)
CO <sub>2</sub>	1	100*
CH <sub>4</sub>	25	12

GHG	GWP (100-year time horizon)	Atmospheric Lifetime (years)
N <sub>2</sub> O	298	114
HFCs	Up to 14,800	Up to 270
PFCs:	Up to 12,200	2,600 – 50,000
SF <sub>6</sub>	22,800	3,200
NF <sub>3</sub>	17,200	740

Source: CARB, 2021.

*\* No single lifetime can be given for CO<sub>2</sub> because it moves throughout the earth system at differing rates. Some CO<sub>2</sub> will be absorbed very quickly, while some will remain in the atmosphere for thousands of years.*

### Thresholds of Significance

As stated under Regulatory Context, §15064.4 of the CEQA Guidelines gives lead agencies the discretion to determine whether to use a model or other method to quantify GHG emissions and/or to rely on a qualitative or performance-based standard.

For a quantitative analysis, a lead agency could determine a less-than-significant impact if a project did not exceed an established numerical threshold. For a qualitative/performance-based threshold, a lead agency could determine a less-than-significant impact if a project complies with State, regional, and/or local programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

If a qualitative approach is used, lead agencies should still quantify a project's construction and operational GHG emissions to determine the amount, types, and sources of GHG emissions resulting from the project. Quantification may be useful in indicating to the lead agency and the public whether emissions reductions are possible, and if so, from which sources. For example, if quantification reveals that a substantial portion of a project's emissions result from mobile sources (automobiles), a lead agency may consider whether design changes could reduce the project's vehicle miles traveled (OPR, 2018).

Neither the District nor SCAQMD have adopted numerical thresholds of significance or performance-based standards for GHG emissions. Numerical thresholds that have been referenced for other projects in the region range from 900 MT/year CO<sub>2</sub>e (Tehama County) to 1,100 MT/year CO<sub>2</sub>e for both construction and operational emissions and 10,000 MT/year CO<sub>2</sub>e for stationary sources (various communities in the Sacramento Valley and Northeast Plateau air basins). For this project, the FRVCS D has determined that a conservative threshold of 900 MT/year CO<sub>2</sub>e is appropriate.

### Project GHG Emissions

GHG emissions for the proposed project were estimated using the CalEEMod.2022.1.0 software. CalEEMod is a statewide model designed to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

CalEEMod also includes the intensity factors for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O for the utility company that will serve the proposed project. Therefore, CalEEMod uses PG&E's mix of renewable and non-renewable energy sources to estimate indirect GHG emissions associated with electricity use.

Output files, as well as site-specific inputs and assumptions, are provided in **Appendix A**.

**Construction Emissions**

Emissions from construction are based on all construction-related activities associated with the proposed project, including but not limited to site preparation, grading, trenching, use of construction equipment, and material hauling. Construction of the proposed project would emit GHG emissions as shown in **Table 4.8-3**, primarily from the combustion of diesel fuel in heavy equipment.

**TABLE 4.8-3  
Estimated Construction-Related Greenhouse Gas Emissions**

<b>Total Construction Emissions (Metric Tons)</b>				
<b>Year</b>	<b>Carbon Dioxide (CO<sub>2</sub>)</b>	<b>Methane (CH<sub>4</sub>)</b>	<b>Nitrous Oxide (N<sub>2</sub>O)</b>	<b>Carbon Dioxide Equivalent (CO<sub>2</sub>e)</b>
2024	136	0.01	Trace	137
2025	204	0.01	0.01	207
2026	103	Trace	Trace	104
<b>Total</b>	<b>443</b>	<b>0.02</b>	<b>0.01</b>	<b>448</b>

Source: CalEEMod, 2023

Note: Totals may not add due to CalEEMod calculation factors and/or rounding.

**Operational Emissions**

Emissions from operation of the project are based on proposed operational activities, including vehicle traffic, electricity usage, wastewater treatment, solid waste disposal, use of architectural coatings, etc. Construction emissions are amortized over a 30-year period, which is considered the minimum service life of the project, and added to the operational emissions.

As stated in Section 4.3 (Air Quality) under Questions A and B, the project’s increase in operational emissions over existing levels would be attributed to indirect emissions associated with use of electricity to operate the septic tank effluent pump (STEP) systems, two new lift stations and the new aeration equipment at the WWTP. There would be a decrease in energy use at the existing lift stations because old, inefficient pumps and motors would be replaced.

**Table 4.8-4** shows the estimated highest daily levels of operational emissions by source. For the proposed project, mobile sources include on-road motor vehicles and off-road engines and equipment used for maintenance activities. Area-wide sources include consumer products, architectural coatings, and road dust. Reporting under “water/wastewater” includes increased sewer flows resulting from connecting existing structures to the public sewer system. Energy sources include electricity generated from fossil fuels (indirect emissions) that is used to operate pumps, motors, aerators, etc. Stationary sources include the emergency generator.

**TABLE 4.8-4  
Estimated Annual Operational Greenhouse Gas Emissions**

<b>Source</b>	<b>Total Operational Emissions (Metric Tons)</b>			
	<b>Carbon Dioxide (CO<sub>2</sub>)</b>	<b>Methane (CH<sub>4</sub>)</b>	<b>Nitrous Oxide (N<sub>2</sub>O)</b>	<b>Carbon Dioxide Equivalent (CO<sub>2</sub>e)</b>
Mobile	2.22	Trace	Trace	2.26
Area	0.01	Trace	Trace	0.01
Energy	6.36	Trace	Trace	6.41

Source	Total Operational Emissions (Metric Tons)			
	Carbon Dioxide (CO <sub>2</sub> )	Methane (CH <sub>4</sub> )	Nitrous Oxide (N <sub>2</sub> O)	Carbon Dioxide Equivalent (CO <sub>2</sub> e)
Water/Wastewater	21.1	1.13	0.03	57.5
Solid Waste	0.11	0.01	0	.39
Refrigerants	0	0	0	0.04
Stationary	43.9	Trace	Trace	44.0
Amortized Construction Emissions	14.77	Trace	Trace	14.93
<b>Total</b>	<b>88.47</b>	<b>1.15</b>	<b>0.03</b>	<b>125.93</b>

Source: CalEEMod, 2023

Note: Totals may not add due to CalEEMod calculation factors and/or rounding.

As indicated in **Table 4.8-4**, the highest levels of GHG emissions are anticipated to be generated as a result of conveying and treating increased wastewater flows, and by stationary sources (emergency standby generators). Electricity for the proposed project would be provided by PG&E. As stated under Regulatory Context, the new standards established by SB 100 (2018) require 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045 for both investor-owned utilities and publicly owned utilities, resulting in a corresponding decrease in GHG emissions.

In addition, the project will result in a decrease in indirect emissions associated with power consumption at the existing lift stations because old inefficient pumps, motors, controls, and other miscellaneous equipment would be replaced with new energy-efficient models. Further, as documented in Section 4.17 (Transportation), the project does not include any components that would increase VMT or result in mobile source emissions over existing levels.

Although the extension of the public sewer system could facilitate new construction on undeveloped parcels in the project area, future development would be in accordance with the County's General Plan and would comply with the State's Building Code and Energy Efficiency Standards, and other applicable State and local codes that were enacted for the purpose of minimizing GHG emissions.

Therefore, the project's impacts associated with increased GHG emissions would be **less than significant**.

#### Question B

See discussion under Regulatory Context and Question A above. A project is considered consistent with plans, policies, or regulations adopted to reduce GHG emissions if it implements the requirements of such plans, policies, or regulations and does not impede attainment of established GHG goals. The County will ensure through contractual obligations that the project complies with applicable regulations enacted to reduce GHG emissions. Therefore, there would be **no impact** due to a conflict with a plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

## CUMULATIVE IMPACTS

GHG emissions and global climate change are, by nature, cumulative impacts. Unlike criteria pollutants, which are pollutants of regional and local concern, GHGs are global pollutants and are not limited to the area in which they are generated. As discussed under Regulatory Context above, the State legislature has adopted numerous programs and regulations to reduce statewide GHG emissions. Because the project will comply with regulations adopted to reduce GHG emissions, the project's contribution to cumulative GHG emissions would be less than significant.

## MITIGATION

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None necessary.

## DOCUMENTATION

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## 4.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e. For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## REGULATORY CONTEXT

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### FEDERAL

#### Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is the primary federal law for the regulation of solid waste and hazardous waste in the United States and provides for the “cradle-to-grave” regulation that requires businesses, institutions, and other entities that generate hazardous waste to track such waste from the point of generation until it is recycled, reused, or properly disposed of. The U.S. Environmental Protection Agency (USEPA) has primary responsibility for implementing the RCRA.

#### USEPA’s Risk Management Plan

Section 112(r) of the federal CAA (referred to as the USEPA’s Risk Management Plan) specifically covers “extremely hazardous materials” which include acutely toxic, extremely flammable, and highly explosive substances. Facilities involved in the use or storage of extremely hazardous materials must implement a Risk Management Plan (RMP), which requires a detailed analysis of potential accident factors and implementation of applicable mitigation measures.

#### Federal Occupational Safety and Health Administration (OSHA)

The Occupational Safety and Health Act (OSHA) prepares and enforces occupational health and safety regulations with the goal of providing employees a safe working environment. OSHA regulations apply to the work place and cover activities ranging from confined space entry to toxic chemical exposure.

#### U.S. Department of Transportation

The United States Department of Transportation regulates the interstate transport of hazardous materials and wastes through implementation of the Hazardous Materials Transportation Act. This act specifies driver-training requirements, load labeling procedures, and container design and safety specifications. Transporters of hazardous wastes must also meet the requirements of additional statutes such as RCRA, discussed previously.

### STATE

#### California Code of Regulations (CCR), Title 22, Definition of Hazardous Material

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, State, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22, §66260.10, of the CCR as: *“A substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may*

*either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.”*

### **Department of Toxic Substances Control**

The California Department of Toxic Substances Control (DTSC) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under the RCRA and the State Hazardous Waste Control Law. Both laws impose “cradle-to-grave” regulatory systems for handling hazardous waste in a manner that protects human health and the environment.

### **California Occupational Safety and Health Administration (Cal/OSHA)**

Cal/OSHA has primary responsibility for developing and enforcing state workplace safety regulations, including requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.

### **Regional Water Quality Control Board**

The SWRCB and RWQCBs regulate hazardous substances, materials, and wastes through a variety of state statutes, including the Porter-Cologne Water Quality Control Act and underground storage tank cleanup laws. The Regional Boards regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. Any person proposing to discharge waste within the State must file a report of waste discharge with the appropriate regional board. The proposed project is located within the jurisdiction of the CVRWQCB.

### **Hazardous Materials Emergency Response/Contingency Plan**

Chapter 6.95, §25503, of the California Health and Safety Code requires businesses that handle/store a hazardous material or a mixture containing a hazardous material to establish and implement a Business Plan for Emergency Response (Business Plan). A Business Plan is required when the amount of hazardous materials exceeds 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases. A Business Plan is also required if federal thresholds for extremely hazardous substances are exceeded. The Business Plan includes procedures to deal with emergencies following a fire, explosion, or release of hazardous materials that could threaten human health and/or the environment.

### **California Accidental Release Prevention Program (CalARP)**

The goal of CalARP is to prevent accidental releases of substances that pose the greatest risk of immediate harm to the public and the environment. Facilities are required to prepare a Risk Management Plan in compliance with CCR Title 19, Division 2, Chapter 4.5, if they handle, manufacture, use, or store a federally regulated substance in amounts above established federal thresholds; or if they handle a state regulated substance in amounts greater than state thresholds and have been determined to have a high potential for accident risk.

## **LOCAL**

### **Shasta County**

The Shasta County General Plan includes the following Objectives that apply to the proposed project:

#### **Chapter 5.6, Hazardous Materials; Chapter 5.4, Fire Safety and Sheriff Protection**

<b>Objectives:</b>	HM-1	Protection of life and property from contact with hazardous materials through site design and land use regulations and storage and transportation standards.
	HM-2	Protection of life and property in the event of the accidental release of hazardous materials through emergency preparedness planning.

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FS-1	Protect development from wildland and non-wildland fires by requiring new development projects to incorporate effective site and building design measures commensurate with level of potential risk presented by such a hazard and by discouraging and/or preventing development from locating in high-risk fire hazard areas.
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**Shasta County Hazardous Materials Area Plan, 2018**

The Shasta County Hazardous Materials Area Plan establishes policies, responsibilities, and procedures required to protect the health and safety of Shasta County's citizens, the environment, and public and private property from the effects of hazardous materials emergency incidents.

The Area Plan establishes the emergency response organization for hazardous materials incidents occurring within Shasta County including the cities of Redding, Anderson, and Shasta Lake. This Plan documents the operational and general response procedures for the Shasta-Cascade Hazardous Materials Response Team (SCHMRT), which is the primary hazardous materials response group for Shasta County.

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**DISCUSSION OF IMPACTS**

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**Questions A and B**

The project would result in the continued use of sodium hypochlorite (bleach) to control odors at the WWTP. The transport, storage, and use of sodium hypochlorite would be conducted in accordance with federal, State, and local regulations including, but not limited to, those identified under Regulatory Context.

During construction, limited quantities of hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc., may temporarily be brought into areas where improvements are proposed. There is a possibility of accidental release of hazardous substances into the environment, such as spilling petroleum-based fuels used for construction equipment. Construction contractors would be required to comply with applicable federal and state environmental and workplace safety laws. Additionally, construction contractors are required to implement BMPs for the storage, use, and transportation of hazardous materials. Therefore, impacts would be **less than significant**.

**Question C**

According to the Shasta County Office of Education, schools in the study area include Fall River Elementary School on Curve Street in Fall River Mills; Soldier Mountain High School and Fall River Community Day School on A Street in McArthur; and the Fall River Junior-Senior High School on Walnut Street in McArthur. Improvements at LS 3 (River Street) would occur ±0.22 miles southeast of Fall River Elementary School. Installation of sewer lines would occur adjacent to Soldier Mountain High School, Fall River Community Day School, and Fall River Junior-Senior High School, and sewer laterals would be extended to these schools.

As described under Questions A and B above, although the project includes the use and transport of sodium hypochlorite, and project construction would involve temporary use of relatively small quantities of materials such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc., potential impacts associated with hazardous materials would be **less than significant** with compliance with existing laws and regulations, and no mitigation measures are required.

**Question D**

The following databases were reviewed to locate hazardous waste facilities, land designated as hazardous waste property, and hazardous waste disposal sites in accordance with California Government Code §65962.5:

- List of Hazardous Waste and Substances sites from the DTSC EnviroStor Database.
- SWRCB GeoTracker Database

- List of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit.
- List of active Cease and Desist Orders and Clean-Up and Abatement Orders from the SWRCB.

Review of the above records identified one active clean-up site in the project area as follows:

Roy's Chevron, 43103 HWY 299E

The Roy's Chevron cleanup site is located  $\pm 450$  feet north of Lift Station 1 off of Bridge Street and  $\pm 620$  feet west of Lift Station 3 off of River Street. The case was opened in 1996 due to the release of petroleum hydrocarbons from four gasoline underground storage tanks. According to a Phase I/II Investigation prepared by Weston Solutions, Inc., in March 2020, there is no indication that soil or groundwater contamination extends beyond the clean-up site.

No other hazardous waste facilities/sites were identified in the project area. Therefore, due to the distance between the project site and the active clean-up site, there would be **no impact**.

### Question E

According to Shasta County GIS data (Shasta County, 2022), a large portion of the project site is located within the Fall River Mills Airport (Airport) Planning Boundary. The existing WWTP ponds are located immediately west of the Airport. When the runway at the Airport was extended in 2010, two of the WWTP ponds were relocated, which provided a larger buffer between the runway and the ponds. The nearest of these ponds is currently  $\pm 700$  feet from the Airport runway.

The Federal Aviation Administration (FAA) recognizes that wastewater treatment ponds can attract wildlife, primarily birds, thereby increasing the potential for aircraft collisions with birds and other wildlife when such ponds are located in proximity to an airport. This poses a potential threat to people working and residing in the area.

According to the FRVCSD, waterfowl (mostly ducks) have been observed at the WWTP; however, it is rare to see more than a handful of waterfowl using the wastewater ponds, likely due to the abundance of more attractive habitat in the vicinity (i.e., Fall River Lake, the Fall River, and the Pit River). District staff does not know the direction from which waterfowl visit the wastewater ponds, but the general perception is that most waterfowl enter and exit the wastewater ponds from Fall River Lake, and their flight pattern does not cross the Airport.

FAA Advisory Circular 150/5200-33C, Hazardous Wildlife Attractants on or Near Airports (FAA, 2020), provides guidance for siting facilities that have a potential to attract wildlife near airports. The Circular recommends that the distance from the runway edge to the nearest wastewater pond be 10,000 feet or more for airports serving turbine-powered aircraft.

The proposed project could potentially double flows to the WWTP. Improvements at the WWTP include constructing a small earthen aeration pond within one of the existing primary ponds. The water surface area for the aeration pond would be about  $\pm 36,000$  square feet (0.82 acres). The new pond would be deeper than the existing (surrounding) pond so it would hold more water with less exposed surface area. Surface water would always be present in two of the ponds and would be intermittently present in a third pond.

The project is not anticipated to increase the presence of birds and other wildlife in the area; however, because the existing ponds at the WWTP are closer to the Airport than the FAA's recommended separation distance, the FRVCSD provided information on the proposed project to the Shasta County Airport Manager and the FAA with a request for information regarding any requirements for completing work at the WWTP.

On November 3, 2022, a meeting (conference call) was conducted with Christopher D. Jones, Ph.D., Environmental Protection Specialist with the FAA, Shawn Ankeny, Fall River Mills Airport Manager, and representatives from the FRVCSD, ENPLAN, and PACE Engineering.

During the meeting, it was acknowledged that there have been no known bird strikes reported at the Airport in the last 50 years. Dr. Jones stated that because the new aeration pond would be constructed within an existing pond and would be deeper than the existing ponds, there would not be an increase in water surface area for potential use by waterfowl when compared to existing conditions, and there would not be an increased risk of wildlife strikes at the Airport resulting from the proposed project. FAA stated that the Airport should consider developing a program to monitor wildlife strikes at the Airport and identify wildlife hazards that need to be addressed. The Airport Manager agreed that the Airport will work with the pilots to encourage self-reporting of strikes, near misses, and other observations of wildlife hazards.

On November 16, 2022, Dr. Jones provided written comments to Shawn Ankeny, Fall River Mills Airport Manager, documenting the conclusions reached during the November 3, 2022, meeting. This letter is included in **Appendix E**.

In terms of temporary impacts, although construction workers would be completing improvements within the Airport Planning Boundary, airport operations must comply with Federal Aviation Administration (FAA) Regulations, including the FAA Airport Safety Program, which addresses general aviation airport safety, runway safety, and safety management systems. These regulations were established, in part, to protect the health and safety of individuals living and working in proximity to an airport.

Therefore, the potential for the project to result in a safety hazard for people residing or working in proximity to the Airport would be ***less than significant***.

#### **Question F**

The proposed project does not involve a use or activity that could interfere with long-term emergency response or emergency evacuation plans for the area. Although a temporary increase in traffic could occur during construction and could interfere with emergency response times, construction-related traffic would be minor due to the overall scale of the construction activities. Further, construction-related traffic would be spread over the duration of the construction schedule and would be minimal on a daily basis. The FRVCSD will be required to obtain an encroachment permit from Shasta County prior to working in the public road ROW. An encroachment permit from Caltrans would also be required for work in the SR 299 ROW.

As required by the encroachment permits, temporary traffic control during completion of activities that require work in the public road ROW is required and must adhere to the procedures, methods and guidance given in the current edition of the California Manual on Uniform Traffic Control Devices (MUTCD) (Caltrans, 2021). The MUTCD requires preparation of a traffic control plan that addresses the needs of all road users (motorists, bicyclists, and pedestrians) and identifies protective measures to ensure the safety of road users, workers, and emergency responders. The plan would identify the location of the work, affected roads, and types and locations of temporary traffic control measures (i.e., signs, cones, flaggers, etc.) that would be implemented during the work. Implementation of a traffic control plan in accordance with MUTCD requirements ensures that the proposed project would not interfere with emergency response vehicles or an emergency evacuation plan; therefore, impacts during construction would be ***less than significant***.

#### **Question G**

As documented in Section 4.20 (Wildfires), the proposed project does not include any development or improvements that would increase the long-term risk of wildland fires or expose people or structures to wildland fires. The majority of the improvements would occur within a Local Responsibility Area (LRA). The Country Club Subdivision and surrounding area is identified as being in a State Responsibility Area (SRA) High Fire Hazard Severity Zone (FHSZ). No other High or Very High FHSZs are identified in the project area.

Equipment used during construction activities may create sparks that could ignite dry grass. Also, the use of power tools may increase the risk of wildland fire hazard. In accordance with Cal/OSHA regulations (Division 1, Chapter 4, Subchapter 4, Article 36 (Fire Protection and Prevention), a fire



protection program must be followed throughout all phases of construction. The contractor is responsible for providing firefighting equipment and maintaining unobstructed access to all available firefighting equipment at all times. Implementation of the fire protection program ensures that impacts would be *less than significant*.

## CUMULATIVE IMPACTS

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As documented above, the proposed project does not include any components that would result in long-term risks associated with hazards or hazardous materials.

The storage and use of hazardous materials must be conducted in accordance with State and local regulations, and steps must be taken during construction to reduce potential impacts associated with wildland fires. A traffic control plan is required in accordance the MUTCD requirements to ensure that the project does not interfere with emergency response vehicles. These regulations ensure that impacts are less than significant and that activities do not result in impacts that would be cumulatively considerable.

## MITIGATION

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None necessary.

## DOCUMENTATION

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- Weston Solutions, Inc.** 2020. Final Phase I/II Investigation Targeted Brownfields Assessment Report, Fall River Mills – Highway 299 E 43103, Fall River Mills, Shasta County, California. [https://documents.geotracker.waterboards.ca.gov/regulators/deliverable\\_documents/1476224601/Final%20TBA%20Report%20-%20Fall%20River%20Mills-Hwy%20299%20E%2043103.pdf](https://documents.geotracker.waterboards.ca.gov/regulators/deliverable_documents/1476224601/Final%20TBA%20Report%20-%20Fall%20River%20Mills-Hwy%20299%20E%2043103.pdf). Accessed December 2022.

## 4.10 HYDROLOGY AND WATER QUALITY

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## REGULATORY CONTEXT

### FEDERAL

#### Clean Water Act (CWA)

The CWA (33 USC §1251-1376), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality and was established to “*restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.*” Pertinent sections of the Act are as follows:

1. Sections 303 and 304 provide for water quality standards, criteria, and guidelines.
2. Section 401 (Water Quality Certification) requires an applicant for any federal permit that would authorize a discharge to waters of the U.S to obtain certification from the state that the discharge will comply with other provisions of the Act.
3. Section 402 establishes the NPDES, a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the U.S. This permit program is administered by the SWRCB and is discussed in detail below.
4. Section 404, jointly administered by the USACE and USEPA, establishes a permit program for the discharge of dredged or fill material into waters of the U.S.

## **Federal Anti-Degradation Policy**

The federal Anti-Degradation Policy is part of the CWA (Section 303(d)) and is designed to protect water quality and water resources. The policy directs states to adopt a statewide policy that protects designated uses of water bodies (e.g., fish and wildlife, recreation, water supply, etc.). The water quality necessary to support the designated use(s) must be maintained and protected.

## **Safe Drinking Water Act**

Under the 1974 Safe Drinking Water Act, most recently amended in 1996, USEPA regulates contaminants of concern to domestic water supply, which are those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are classified as either primary or secondary Maximum Contaminant Levels (MCLs). MCLs and the process for setting these standards are reviewed triennially.

## **Federal Emergency Management Agency (FEMA)**

FEMA is responsible for mapping flood-prone areas under the National Flood Insurance Program (NFIP). Communities that participate in the NFIP are required to adopt and enforce a floodplain management ordinance to reduce future flood risks related to new construction in a flood hazard area. In return, property owners have access to affordable federally-funded flood insurance policies.

## **National Pollutant Discharge Elimination System**

Under Section 402(p) of the CWA, the USEPA established the NPDES to enforce discharge standards for both point-source and non-point-source pollution. Dischargers can apply for individual discharge permits, or apply for coverage under the General Permits that cover certain qualified dischargers. Point-source discharges include municipal and industrial wastewater, stormwater runoff, combined sewer overflows, sanitary sewer overflows, and municipal separate storm sewer systems. NPDES permits impose limits on discharges based on minimum performance standards or the quality of the receiving water, whichever type is more stringent in a given situation.

## **STATE**

### **Porter-Cologne Water Quality Control Act**

The Porter-Cologne Water Quality Control Act (California Water Code §13000 *et seq.*) is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of waters of the State. The Porter-Cologne Act applies to surface waters, wetlands, and groundwater, and to both point and non-point sources of pollution. The Act requires a Report of Waste Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. The RWQCBs enforce waste discharge requirements identified in the Report.

### **State Anti-Degradation Policy**

In 1968, as required under the Federal Anti-Degradation Policy, the SWRCB adopted an Anti-Degradation Policy, formally known as the *Statement of Policy with Respect to Maintaining High Quality Waters in California* (State Water Board Resolution No. 68-16). Under the Anti-Degradation Policy, any actions that can adversely affect water quality in surface or ground waters must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial use of the water, and not result in water quality less than that prescribed in water quality plans and policies.

### **National Pollution Discharge Elimination System**

Pursuant to the federal CWA, the responsibility for issuing NPDES permits and enforcing the NPDES program was delegated to the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB). NPDES permits are also referred to as waste discharge requirements (WDRs) that regulate discharges to waters of the United States. Below is a description of relevant NPDES general permits.

### **Construction Activity and Post-Construction Requirements**

Discharges from construction sites that disturb one acre or more of total land area are subject to the NPDES permit for *Discharges of Storm Water Runoff associated with Construction Activity* (currently Order WQ 2022-0057-DWQ, NPDES No. CAS000002), also known as the Construction General Permit. The permitting process requires the development and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP). Coverage under the Construction General Permit is obtained by submitting a Notice of Intent (NOI) to the SWRCB and preparing the SWPPP prior to the beginning of construction. The SWPPP must include BMPs to reduce pollutants and any more stringent controls necessary to meet water quality standards. Dischargers must also comply with water quality objectives as defined in the applicable Basin Plan.

The Construction General Permit includes post-construction requirements for areas in the State not covered by a Standard Urban Storm Water Management Plan (SUSWMP) or a Phase I or Phase II Small Municipal Separate Storm Sewer Systems (MS4) Permit. These requirements are intended to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect water quality impacts (i.e., pollution and/or hydromodification) upstream or downstream.

Where applicable, the SWPPP submitted to the SWRCB with the NOI must include a description of all post-construction stormwater management measures. The SWRCB SMARTS post-construction calculator or similar method would be used to quantify the runoff reduction resulting from implementation of the measures. The applicant must also submit a plan for long-term maintenance with the NOI. The maintenance plan must be designed for a minimum of five years and must describe the procedures to ensure that the post-construction stormwater management measures are adequately maintained.

#### ***Dewatering Activities (Discharges to Surface Waters and Storm Drains)***

Construction dewatering activities that involve the direct discharge of relatively pollutant-free wastewater that poses little or no threat to the water quality of waters of the U.S. are subject to the provisions of CVRWQCB Order R5-2022-0006 (NPDES No. CAG995002), *Waste Discharge Requirements, Limited Threat Discharges to Surface Water*, as amended. WDRs for this order include discharge prohibitions, receiving water limitations, monitoring, and reporting, etc. Coverage is obtained by submitting a NOI to the applicable RWQCB.

#### ***Dewatering Activities (Discharges to Land)***

Construction dewatering activities that are contained on land and do not discharge to waters of the U.S. are authorized under SWRCB Water Quality Order No. 2003-003-DWQ if the discharge is of a quality as good as or better than the underlying groundwater, and there is a low risk of nuisance. Note: The CVRWQCB may determine that construction dewatering discharges to land should be regulated under other WDRs or a conditional waiver, such as Resolution R5-2018-085, *Waiver of Reports of Waste Discharge and WDRs for Specific Types of Discharge within the Central Valley Region*.

### **Water Quality Control Plans (Basin Plans)**

Each of the State's RWQCBs is responsible for developing and adopting a basin plan for all areas within its region. The Plans identify beneficial uses to be protected for both surface water and groundwater. Water quality objectives for all waters addressed through the plans are included, along with implementation programs and policies to achieve those objectives. Waste discharge requirements (WDRs) were adopted in order to attain the beneficial uses listed for the Basin Plan areas.

### **Sustainable Groundwater Management Act**

The Sustainable Groundwater Management Act (SGMA), enacted in September 2014, established a framework for groundwater resources to be managed by local agencies in areas designated by the Department of Water Resources as "medium" or "high" priority basins. Basins were prioritized based, in part, on groundwater elevation monitoring conducted under the California Statewide Groundwater Elevation Monitoring (CASGEM) program.

The SGMA requires local agencies in medium- and high-priority basins to form Groundwater Sustainability Agencies (GSAs) and be managed in accordance with locally-developed Groundwater Sustainability Plans (GSPs). Medium- and high-priority basins must be managed under a GSP by January 31, 2022. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans.

## LOCAL

### Shasta County

The Shasta County General Plan includes the following Objective and Policies that apply to the proposed project:

<b>Chapter 5.2, Flood Protection; Chapter 6.6, Water Resources and Water Quality</b>		
<b>Objective:</b>	FL-1	Protection of public health and safety, both on-site and downstream, from flooding through floodplain management which regulates the types of land uses which may locate in the floodplain, prescribes construction designs for floodplain development, and requires mitigation measures for development which would impact the floodplain by increasing runoff quantities.
<b>Policies:</b>	FL-c	Whenever possible, flood control measures should consist of channel diversions or limited floodplain designs which avoid alteration of creeks and their immediate environs.
	FL-h	The impacts of new development on the floodplain or other downstream areas due to increased runoff from that development shall be mitigated. In the case of the urban or suburban areas, and in the urban and town centers, the County may require urban or suburban development to pay fees which would be used to make improvements on downstream drainage facilities in order to mitigate the impacts of upstream development.
	W-a	Sedimentation and erosion from proposed developments shall be minimized through grading and hillside development ordinances and other similar safeguards as adopted and implemented by the County.

## DISCUSSION OF IMPACTS

### Questions A and E

The proposed project has the potential to temporarily degrade water quality due to increased erosion during project construction; however, as discussed under Regulatory Context above, and in Section 4.7 under Question B, the SWRCB Construction General Permit requires implementation of an effective SWPPP that includes BMPs to control construction-related erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat. The proposed project is also subject to post-construction requirements included in the SWRCB Construction General Permit to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect impacts from stormwater runoff (i.e., pollution and/or hydromodification) upstream or downstream.

In addition, if dewatering is required during construction, the project is subject to a CVRWQCB General Order that includes specific requirements for monitoring, reporting, and implementing BMPs for construction dewatering activities. The FRVCSO must also obtain a State Water Quality Certification (or waiver) from the CVRWQCB to ensure that the project will not violate established State water quality standards. The FRVCSO also must file a Report of Waste Discharge for any discharge of waste to land or surface waters that may impair a beneficial use of surface or groundwater of the State.



As discussed under Regulatory Context above, the SGMA established a framework for groundwater resources to be managed by local agencies in areas designated by the Department of Water Resources as medium or high priority basins. The project is located within the Fall River Valley groundwater basin, a low-priority basin, and there is not a sustainable groundwater management plan that applies to the project area.

Because BMPs for erosion and sediment control would be implemented throughout construction, and post-construction measures would be implemented in accordance with the SWRCB Construction General Permit, the project would not violate any water quality standards or waste discharge requirements or conflict with or obstruct implementation of a water quality control plan. Impacts would be **less than significant**.

#### Question B

The proposed project would not use groundwater for construction or operation. Construction of the two new lift stations in McArthur, the blower building at the WWTP, and appurtenant improvements would result in an increase in impervious surface of  $\pm 1,000$  square feet. The addition of impervious surface would decrease the area available for water penetration, thereby reducing local groundwater recharge potential. However, the increase in impervious surface represents a very small percentage of the entire surface area of the hydrologic region. Runoff would be directed to areas with pervious surface, and the undeveloped land adjacent to the new lift stations and blower building would continue to provide for groundwater recharge. Therefore, the project's impacts associated with groundwater recharge would be **less than significant**.

#### Question C

As stated under Question B, the project would result in an increase of  $\pm 1,000$  square feet of impervious surface associated with the new lift stations in McArthur, and the blower building at the WWTP. Improvement plans for the proposed project would be prepared by a licensed engineer to ensure that the improvements do not alter drainage patterns in the area in a manner that would result in increased surface runoff, flooding on- or off-site, or otherwise degrade water quality. In addition, as discussed under Question A, BMPs would be implemented throughout construction to minimize erosion and runoff in accordance with existing regulations. Post-construction measures would also be identified to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect impacts from stormwater runoff (i.e., pollution and/or hydromodification) upstream or downstream; therefore, impacts would be **less than significant**.

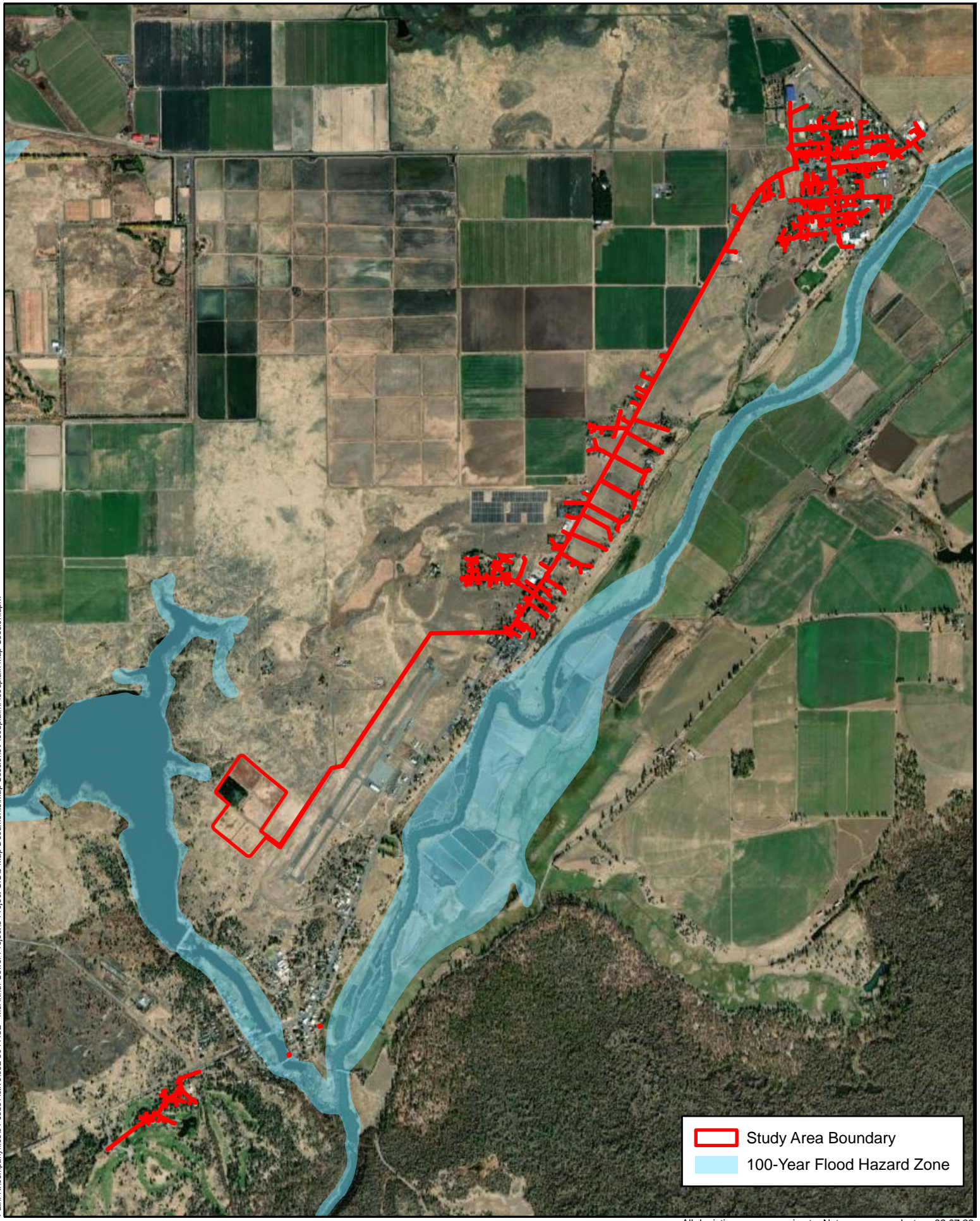
#### Question D



A tsunami is a wave generated in a large body of water (typically the ocean) by fault displacement or major ground movement. The project area is located approximately 140 miles east of the Pacific Ocean, and there is no risk of tsunami.

A seiche is a standing wave that oscillates in an enclosed body of water in response to ground shaking. Seiches potentially threaten low lying communities and infrastructure in proximity to the affected water body. As discussed in Section 4.7 under Question A and shown in **Figure 4.7-1**, the active McArthur fault and potentially active Hat Creek fault could produce moderate ground shaking, and seiches could potentially be generated in Fall River Lake. However, it is not likely that such ground shaking would cause a seiche large enough to overtop Fall River Lake and its associated dam.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (Panels 06089C0500G and 06089C0800G, effective March 17, 2011), LS 1 (Bridge Street) is located within a FEMA-designated 100-year flood hazard zone (Zone A – no base flood elevations determined) (see **Figure 4.10-1**). No other improvements are proposed within a FEMA-designated flood hazard zone. Work at LS 1 includes replacing existing pumps, motors, electrical, controls, and piping in the same location, and adding SCADA equipment within the existing building. No increase in capacity at LS 1 would occur, and the project does not include any components that would increase the risk of release of pollutants due to project inundation by a flood. Therefore, impacts would be **less than significant**.





 Study Area Boundary  
 100-Year Flood Hazard Zone

All depictions are approximate. Not a survey product. 02.07.23

  Feet  
0 2,400

Figure 4.10-1  
**FEMA-Designated Flood Hazard Zones**



## CUMULATIVE IMPACTS

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The proposed project and other potential cumulative projects in the region, including growth resulting from build-out of the Shasta County General Plan, could result in degradation of water quality, adverse impacts to groundwater supplies and groundwater recharge, and an increased risk of flooding due to additional surface runoff generated by the projects.

All projects in the State that result in land disturbance of one acre or more are required to comply with the State Water Board General Construction NPDES permit which requires implementation of BMPs to reduce pollutants and any additional controls necessary to meet water quality standards, as well as to avoid the creation of unstable slopes or filled areas that could adversely influence stormwater runoff. Compliance with existing resource agency requirements ensures that the proposed project's cumulative impacts to hydrology and water quality are less than significant.

## MITIGATION

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None necessary.

## DOCUMENTATION

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**California Department of Water Resources.** 2022. Basin Prioritization Dashboard, Sustainable Groundwater Management Act. <https://gis.water.ca.gov/app/bp-dashboard/final/>. Accessed June 2022.

\_\_\_\_\_. 2022. Groundwater Information System (GAMA). <https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/default.asp?CMD=runreport&myaddress=40.6804279%2C+-122.37084190000002&zl=15>. Accessed June 2022.

**Central Valley Regional Water Quality Control Board.** 2018. Water Quality Control Plan for the Sacramento and San Joaquin River Basins. [https://www.waterboards.ca.gov/centralvalley/water\\_issues/basin\\_plans/sacsjr\\_201902.pdf](https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201902.pdf). Accessed June 2022.

**Federal Emergency Management Agency.** 2022. National Flood Hazard Map (Panels 06089C0500G and 06089C0800G, effective March 17, 2011). <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>. Accessed December 2022.

## 4.11 LAND USE AND PLANNING

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a significant environmental impact due to a conflict with any applicable land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### REGULATORY CONTEXT

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#### FEDERAL

There are no federal regulations pertaining to land use and planning that apply to the proposed project.

#### STATE

##### California Government Code

California Government Code (CGC) §65300 *et seq.* contains many of the State laws pertaining to the regulation of land uses by cities and counties. These regulations include requirements for general plans, specific plans, subdivisions, and zoning. State law requires that all cities and counties adopt General Plans that include seven mandatory elements: land use, circulation, conservation, housing, noise, open space, and safety. A General Plan is defined as a comprehensive long-term plan for the physical development of the county or city, and any land outside its boundaries that is determined to bear relation to its planning. A development project must be found to be consistent with the General Plan prior to project approval.

#### LOCAL

##### Shasta County

The Shasta County General Plan includes objectives and policies designed for the purpose of avoiding or minimizing impacts to the natural environment. The General Plan recognizes that major factors of the natural environment are landforms, water, climate, minerals, soils, vegetation, and wildlife. The Shasta County Code implements the County's General Plan. The purpose of the land use and planning provisions of the Code (Title 17, Zoning) is to provide for the orderly and efficient application of regulations and to implement and supplement related laws of the state of California, including but not limited to the California Environmental Quality Act (CEQA).

### DISCUSSION OF IMPACTS

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#### Question A

Land use impacts are considered significant if a proposed project would physically divide an existing community (a physical change that interrupts the cohesiveness of the neighborhood). The proposed project does not include any components that would create a barrier for existing or planned development; therefore, there would be ***no impact***.

## Question B

As discussed in each resource section of this Initial Study, the proposed project is consistent with applicable Policies and Objectives of the Shasta County General Plan and regulations of the regulatory agencies identified in Section 1.8 of this Initial Study. Where necessary, mitigation measures are included to reduce impacts to less-than-significant levels. Therefore, with implementation of the mitigation measures identified in Section 1.10, the proposed project would not conflict with any plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect; impacts would be **less than significant**.

## CUMULATIVE IMPACTS

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Cumulative projects in the vicinity of the project area, including population growth resulting from build-out of the Shasta County General Plan, would be developed in accordance with local and regional planning documents. Thus, cumulative impacts associated with land use compatibility are expected to be less than significant. In addition, with implementation of the recommended mitigation measures, the proposed project is consistent with the General Plan land use designations, goals, and policies, and would not contribute to the potential for adverse cumulative land use effects.

## MITIGATION

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Implementation of the Mitigation Measures identified in Section 1.10.

## DOCUMENTATION

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**Shasta County**. 2004. Shasta County General Plan, Chapter 6.9 (Open Space and Recreation). <https://www.shastacounty.gov/sites/default/files/fileattachments/planning/page/3048/69open.pdf>. Accessed May 2022.

\_\_\_\_\_. 2004. Shasta County General Plan, Chapter 7.1 (Community Organization and Development Pattern). <https://www.shastacounty.gov/sites/default/files/fileattachments/planning/page/3048/updated-for-online-community-organization-and-development-pattern-2018-he-text-amendments.pdf>. Accessed May 2022.

\_\_\_\_\_. 2022. Shasta County Code of Ordinances. Title 17, Zoning. [https://library.municode.com/ca/shasta\\_county/codes/code?nodeId=CD\\_ORD\\_TIT17ZO](https://library.municode.com/ca/shasta_county/codes/code?nodeId=CD_ORD_TIT17ZO). Accessed May 2022.

## 4.12 MINERAL RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## REGULATORY CONTEXT

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There are no federal or local regulations pertaining to mineral resources that apply to the project.

## Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act (SMARA), Chapter 9, Division 2 of the Public Resources Code (PRC), provides a comprehensive surface mining and reclamation policy to ensure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. Mineral Resource Zones (MRZs) are applied to sites determined by the California Geological Survey (CGS) as being a resource of regional significance, and are intended to help maintain mining operations and protect them from encroachment of incompatible uses. The Zones indicate the potential for an area to contain significant mineral resources.

## DISCUSSION OF IMPACTS

### Questions A and B

According to the CGS, a SMARA mineral land classification study was conducted for Shasta County in 1997 (Dupras, 1997). The study covers five important industrial mineral resources that were being mined in Shasta County at that time; lands containing these industrial minerals have been classified and designated as MRZs in the County. According to the study, there were 72 MRZs in the County at that time; however, there are no designated MRZs in or near the project area. In addition, there are no active mines near the project area. Therefore, there would be **no impact**.

## CUMULATIVE IMPACTS

As documented herein, the proposed project would not result in impacts to mineral resources; therefore, the project would not contribute to adverse impacts associated with cumulative impacts to mineral resources.

## MITIGATION

None necessary.

## DOCUMENTATION

**Department of Conservation**, California Geological Survey. 2015. SMARA Mineral Land Classification Maps.  
<https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps>.  
 Accessed May 2022.

**Dupras, D.** 1997. Mineral Land Classification of Alluvial Sand and Gravel, Crushed Stone, Volcanic Cinders, Limestone, and Diatomite within Shasta County, California.  
<https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc>. Accessed May 2022.

## 4.13 NOISE

Would the project result in:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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 of applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c. For a project located within the vicinity of a private airstrip or an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## NOISE FUNDAMENTALS

Commonly used technical acoustical terms are defined as follows:

<b>Acoustics</b>	The science of sound.
<b>Ambient Noise</b>	The distinctive pre-project acoustical characteristics of a given area consisting of all noise sources audible at that location.
<b>A-Weighting</b>	The sound level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.
<b>Decibel, or dB</b>	The fundamental unit of measurement that indicates the intensity of a sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
<b>L<sub>eq</sub></b>	L <sub>eq</sub> (Equivalent Continuous Sound Pressure Level) is the average sound pressure level during a period of time that takes into account the cumulative effect of multiple noise events.

## REGULATORY CONTEXT

There are no federal or state regulations pertaining to noise that apply to the proposed project.

### LOCAL

#### Shasta County

The Shasta County General Plan includes the following Objectives and Policies that apply to the proposed project:

Chapter 5.5, Noise		
<b>Objectives:</b>	N-1	To protect County residents from the harmful and annoying effects of exposure to excessive noise.
	N-2	To protect the economic base of the County by preventing incompatible land uses from encroaching upon existing or programmed land uses likely to create significant noise impacts.
	N-3	To encourage the application of state-of-the-art land use planning methodologies in the area of managing and minimizing potential noise conflicts.

<b>Policies:</b>	N-b	Noise likely to be created by a proposed non-transportation land use shall be mitigated so as not to exceed the noise level standards of table N-IV as measured immediately within the property line of adjacent lands designated as noise-sensitive. Noise generated from existing or proposed agricultural operations conducted in accordance with generally accepted agricultural industry standards and practices is not required to be mitigated.
	N-i	Where noise mitigation measures are required to achieve the standards of Tables N-IV and N-VI, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving compliance with the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.
	N-i	<p>The use of site planning and building materials/design as primary methods of noise attenuation is encouraged. Recommended techniques include, but are not limited to, such items as:</p> <p><u>Site Planning</u></p> <ul style="list-style-type: none"> <li>• Use of building setbacks and dedication of noise easements to increase the distance between the noise source and the receiver.</li> <li>• Locating uses and orienting buildings that are compatible with higher noise levels adjacent to noise-generators or in clusters as means to shield more noise-sensitive areas and uses.</li> <li>• Using noise-tolerant structures, such as garages or carports, to shield noise-sensitive areas.</li> <li>• Clustering office, commercial, or multiple-family residential structures to reduce interior open-space noise levels.</li> <li>• Locate automobile and truck access to commercial or industrial land uses abutting residential parcels at a maximum practical distance from the residential parcels.</li> <li>• Avoid the siting of commercial and industrial loading and shipping facilities adjacent to residential parcels whenever practicable.</li> <li>• Parking areas for commercial and industrial uses should be set back from adjacent residential uses to the maximum extent feasible, or buffered and shielded by walls, fences, berms, and/or landscaping techniques.</li> </ul>

**Shasta County General Plan Table N-IV  
Noise Level Performance Standards for New Projects Affected By or Including  
Non-Transportation Sources**

<b>Noise Level Descriptor</b>	<b>Daytime (7:00 AM – 10:00 PM)</b>	<b>Nighttime (10:00 PM – 7:00 AM)</b>
<b>Hourly Leq, dB</b>	55 decibels	50 decibels

In rural areas where large lots exist, the exterior noise level standard shall be applied at a point 100 feet away from the residence.

## DISCUSSION OF IMPACTS

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### Question A

Some individuals and groups of people are considered more sensitive to noise than others and are more likely to be affected by the existence of noise. A sensitive receptor is defined as any living entity or aggregate of entities whose comfort, health, or well-being could be impaired or endangered by the existence of noise. The Shasta County General Plan identifies noise-sensitive areas and uses as residential areas, parks, schools, churches, hospitals, and long-term care facilities.

Sensitive receptors in the study area include single-family residences throughout most of the work area. Schools in the study area include Fall River Elementary School on Curve Street in Fall River Mills; Soldier Mountain High School and Fall River Community Day School on A Street in McArthur; and the Fall River Junior-Senior High School on Walnut Street in McArthur. Mayers Memorial Hospital is located adjacent to SR 299 in Fall River Mills. Churches are located in several locations adjacent to SR 299 in Fall River Mills and McArthur.

The effects of noise on people can include annoyance, nuisance, and dissatisfaction; interference with activities such as speech, sleep, and learning; and physiological effects such as hearing loss or sudden startling. A common method to predict human reaction to a new noise source is to compare a project's predicted noise level to the existing environment (ambient noise level). A change of 1 dBA (A-weighted decibels) generally cannot be perceived by humans; a 3-dBA change is considered to be a barely noticeable difference; a 5-dBA change is typically noticeable; and a 10-dBA increase is considered to be a doubling in loudness and can cause an adverse response (Caltrans, 2013).

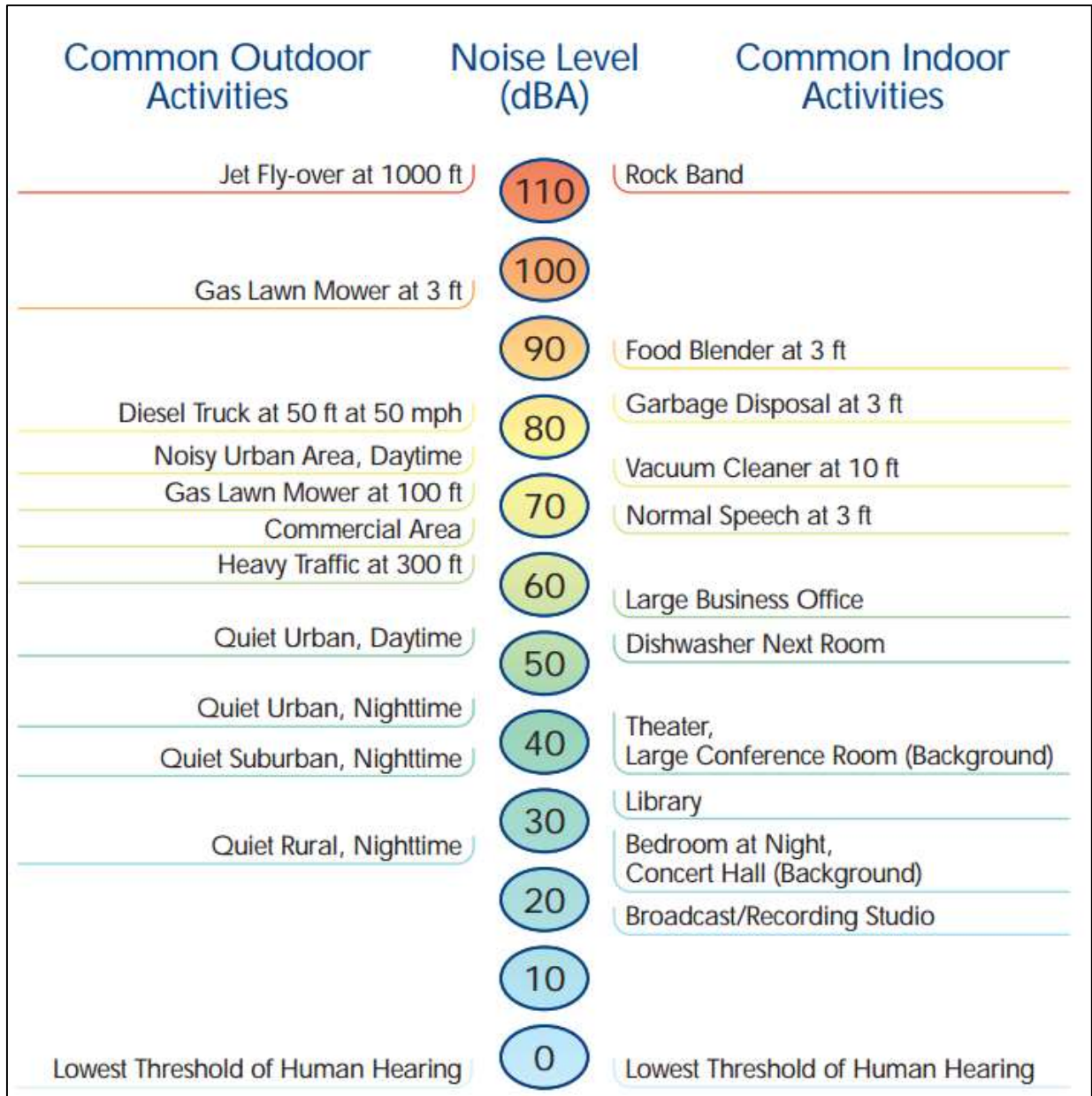
#### **Construction**

Construction activities associated with the project would temporarily increase noise levels at nearby sensitive land uses. The use of heavy equipment to install sewer mains would occur as close as 15 feet from some of the dwelling units where work occurs in alleyways, and 25 feet from some of the dwelling units, schools, and churches where work occurs in road ROWs. Installation of sewer laterals between the sewer main and the plumbing system of buildings would involve trenching on private property and completing plumbing improvements at the foundations of buildings. The nearest sensitive receptors to the existing lift stations are  $\pm 100$  feet from the work sites.

Temporary traffic noise impacts along local streets would occur due to an increase in traffic from construction workers commuting to the site; however, it is not anticipated that worker commutes would significantly increase daily traffic volumes. Noise also would be generated during delivery of construction equipment and materials to the project site.

Noise impacts resulting from construction activities would depend on: 1) the noise generated by various pieces of construction equipment; 2) the timing and duration of noise-generating activities; 3) the distance between construction noise sources and noise-sensitive receptors; and 4) existing ambient noise levels. **Figure 4.13-1** shows noise levels of common activities to enable the reader to compare construction-noise with common activities. Noise levels from construction-related activities would fluctuate, depending on the number and type of construction equipment operating at any given time.

**Figure 4.13-1  
Noise Levels of Common Activities**



Source: Caltrans, 2016

**TABLE 4.13-1**  
**Examples of Construction Equipment**  
**Noise Emission Levels**

Equipment	Typical Noise Level (dBA) 50 feet from Source
Roller	74
Concrete Vibrator	76
Pump	76
Saw	76
Backhoe	80
Air Compressor	81
Generator	81
Compactor	82
Concrete Pump	82
Compactor (ground)	83
Crane, Mobile	83
Concrete Mixer	85
Dozer	85
Excavator	85
Grader	85
Loader	85
Jack Hammer	88
Truck	88
Paver	89
Scraper	89

*Sources: U.S. Department of Transportation, Federal Transit Administration, 2018.*

Noise from construction activities generally attenuates at a rate of 6 dBA (on hard and flat surfaces) to 7.5 dBA (on soft surfaces, such as uneven and/or vegetated terrain) per doubling of distance. If the receptor is far from the noise source, other factors come into play. For example, barriers such as fences or buildings that break the line of sight between the source and the receiver typically reduce sound levels by at least 5 dBA. Likewise, wind can reduce noise levels by 20 to 30 dBA over long distances.

As shown in **Table 4.13-1**, construction equipment anticipated to be used for project construction typically generates maximum noise levels ranging from 74 to 89 decibels (dBA) at a distance of 50 feet. Based on project characteristics, the average noise level from construction activities would be 85 dBA.

In the project area, most of the improvements would occur on hard, flat surfaces between 15 and 25 feet from residences. At a distance of 25 feet, 85 dBA noise levels would increase to 91 dBA; at a distance of 15 feet, 85 dBA noise levels would increase to 95 dBA.

Because it is a logarithmic unit of measurement, a decibel cannot be added or subtracted arithmetically. The combination of two or more identical sound pressure levels at a single location involves the addition of logarithmic quantities as shown in **Table 4.13.2**. A doubling of identical sound sources results in a sound level increase of approximately 3 dB. Three identical sound sources would result in a sound level increase of approximately 4.8 dB. For example, if the sound from one backhoe resulted in a sound pressure level of 80 dB, the sound level from two backhoes would be 83 dB, and the sound level from three backhoes would be 84.8 dB.



**TABLE 4.13-2  
Cumulative Noise: Identical Sources**

Number of Sources	Increase in Sound Pressure Level (dB)
2	3
3	4.8
4	6
5	7
10	10
15	11.8
20	13

*Sources: U.S. Department of Transportation, Federal Transit Administration, 2018. The Engineering Toolbox, 2019.*

In addition, as shown in **Table 4.13-3**, the sum of two or more sounds of a different level is only slightly higher than the louder level. For example, if the sound level from one source is 80 dB, and the sound level from the second source is 85 dB, the level from both sources together would be 86 dB.

To calculate cumulative noise for more than two sources, begin with the two lower levels to find their combined level and add their sum to the next highest level; continue until all noise sources are incorporated.

**TABLE 4.13-3  
Cumulative Noise: Different Sources**

Sound Level Difference between two sources (dB)	Decibels to Add to the Highest Sound Pressure Level
0	3
1	2.5
2	2
3	2
4	1.5
5	1
6	1
7	1
8	0.5
9	0.5
10	0.5
Over 10	0

*Sources: U.S. Department of Transportation, Federal Transit Administration, 2018. The Engineering Toolbox, 2019.*

With two pieces of equipment with a noise level of 89 dBA operating simultaneously within 15 feet of a sensitive receptor, noise levels could reach approximately 102 dBA at the exterior of single-family residences where improvements would occur. Assuming typical California construction methods, interior noise levels are about 10 to 15 dBA lower than exterior levels within residential units with the windows partially open, and approximately 20 to 25 decibels lower than exterior noise levels with the windows closed. Interior noise levels could reach 77 to 82 dBA when equipment operates within 15 feet of a residence, provided that the windows were closed.

In addition, OSHA regulations (Title 29 CFR, §1926.601(b)(4)(i) and (ii) and §1926.602(a)(9)(ii)) state that no employer shall use any motor vehicle, earthmoving, or compacting equipment that has an obstructed view to the rear unless the vehicle has a reverse signal alarm or the vehicle is backed up only when an observer signals that it is safe to do so. Although these regulations require an alarm to be only at a level that is distinguishable from the surrounding noise level ( $\pm 5$  dB), some construction vehicles are pre-equipped with non-adjustable alarms that range from 97 to 112 dBA at four feet. At a distance of 15 feet, 97 to 112 dBA noise levels would decrease to 86 to 101 dBA; depending on the decibel level of the alarm, interior noise levels from a reverse signal alarm could sporadically reach 66 to 81 dBA, provided that the windows were closed.

In the worst-case scenario, with operation of two pieces of equipment with a cumulative noise level of 102 dBA, noise levels at the exterior of the nearest residence could sporadically reach  $\pm 104.5$  dBA. Interior noise levels could reach  $\pm 84.5$  dBA, provided the windows were closed.

The exposure to loud noises (above 85 dB) over a long period of time may lead to hearing loss. The longer the exposure, the greater the risk for hearing loss, especially when there is not enough time for the ears to rest between exposures. Hearing loss can also result from a single extremely loud sound at very close range, such as sirens and firecrackers (Centers for Disease Control, 2018). Even when noise is not at a level that could result in hearing loss, excessive noise can affect quality of life, especially during nighttime hours.

Shasta County does not have specific standards or thresholds for construction noise. The California Division of Safety and Health and OSHA have established thresholds for exposure to noise in order to prevent hearing damage. The maximum allowable daily noise exposure is 90 dBA for 8 hours, 95 dBA for 4 hours, 100 dBA for 2 hours, 105 dBA for 1 hour, 110 dBA for 30 minutes, and 115 dBA for 15 minutes (Caltrans, 2013).

Disregarding the noise attenuation due to intervening topography, barriers, wind, and other factors, in the worst-case scenario, interior noise levels from construction equipment operation would be  $\pm 84.5$  dBA provided the windows were closed. However, construction equipment does not operate continuously throughout the entire work day. In addition, reverse signal alarms are needed only intermittently, and each occurrence involves only seconds of elevated noise levels. Therefore, while construction noise may reach considerable levels for short instances, much of the time the construction noise levels at nearby sensitive receptors would be moderate.

In order to minimize impacts from construction noise, **MM 4.13.1** restricts construction noise to the daytime hours of 7:00 AM to 7:00 PM, Monday through Saturday, **MM 4.13.2** requires that construction equipment be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds. Further **MM 4.13.3** mandates that stationary equipment, such as generators and compressors, shall be located at the furthest practical distance from nearby noise-sensitive land uses.

### **Operational**

Proposed improvements with the potential to increase operational noise levels above existing levels include the new lift stations and emergency standby generators at the new lift stations, and the new aeration system and associated equipment at the WWTP.

### ***New Lift Stations***

Ambient noise levels in the vicinity of the proposed lift stations in McArthur are typical of rural residential areas. Primary noise sources in rural environments are household pets, landscape equipment (e.g., lawnmowers, hedge trimmers, leaf blowers, etc.), natural noise (wind, birds, etc.), and vehicular traffic, including cars, trucks, and emergency vehicles. In addition, agricultural uses, primarily crop production, are prevalent in the study area. Noise sources associated with agricultural uses include tractors, forage harvesters, rice harvesters, loaders, haul trucks, irrigation systems, and other farm equipment. Noise levels from farming activities and equipment typically range from 75 dBA to 95 dBA.

Detailed specifications for lift station equipment have not yet been identified. Based on review of lift stations with similar components, operational noise levels associated with the proposed lift stations are estimated at  $\pm 78$  dBA at 50 feet from the structure, depending on the specific equipment installed. The decibel level for a 100-kW diesel generator is estimated at  $\pm 70$  dBA at 50 feet, depending on the model and manufacturer.

The wet wells and pumps for each lift station would be located below grade and installed in an underground vault. Above-grade facilities at each lift station would include an emergency standby generator, an electrical panel, meter, main switch board and SCADA equipment. The above-grade facilities would be installed in a small concrete masonry unit (CMU) building with a metal roof. The emergency standby generator would be installed on-site inside a sound-attenuated insulated enclosure. The nearest sensitive receptor to the proposed McArthur Main LS is a single-family residence  $\pm 175$  feet to the southeast. The nearest sensitive receptors to the proposed Walnut LS are single-family residences  $\pm 100$  feet to the south and northeast. If no noise barrier was present, noise levels from the McArthur Main LS could reach  $\pm 67$  dBA at the exterior of the nearest residence, and noise levels from the Walnut LS could reach  $\pm 72$  dBA at the exterior of the nearest residence.

It is estimated that the CMU building would provide noise attenuation of at least 30 dBA, depending on final design. With noise attenuation, noise levels from the McArthur Main LS could reach  $\pm 37$  dBA at the exterior of the nearest residence, and noise levels from the Walnut LS could reach  $\pm 42$  dBA at the exterior of the nearest residence, which would not exceed the County's noise level standards and would not have a discernible effect on ambient noise levels at the nearest sensitive receptors. In addition, other than monthly testing, the generators would be used only during emergencies.

Given the existing ambient noise environment in the area, the increase in ambient noise resulting from the new lift stations in McArthur would be minimal.

### ***WWTP Aeration System***

Ambient noise levels near the WWTP are influenced primarily by current WWTP operations and activities associated with the Fall River Mills Airport. The primary noise-generating components of the aeration system are the air blower system. Specifications are not yet available; however, it is anticipated that the system will include up to three 40-50 HP positive-displacement blowers; heating and cooling will be accomplished with a combination of 1) an electric heat pump AC and 2) ventilation with outside air.

Based on review of wastewater treatment plant blower technologies, aeration blowers have an estimated noise level of 85 dBA at three feet. The noise level of the heating/cooling equipment is estimated at 85 dBA at three feet. With four pieces of equipment, each with a noise level of 85 dBA, operating simultaneously, the cumulative noise level would be  $\pm 91$  dBA at three feet. Depending on final design of the aeration system, the nearest residence would be  $\pm 0.3$  miles northeast of the proposed blower building. Fall River Elementary School would be  $\pm 0.6$  miles southwest of the proposed blower building. If no noise barrier was present, noise levels from the blowers and heating/cooling equipment would be about  $\pm 37$  dBA at the exterior of the residence and  $\pm 31$  dBA at the exterior of the school.

Equipment associated with the aeration system would be housed in a new CMU building on the WWTP site. It is estimated that the CMU building would provide noise attenuation of at least 30 dBA, depending on final design. With noise attenuation, noise levels from the aeration system and heating/cooling equipment would not exceed the County's noise level standards and would not have a discernible effect on ambient noise levels at the nearest sensitive receptors.

Because specifications for the lift stations, generators, and aeration system are not yet available, **MM 4.13.4** is included to ensure that the project complies with County noise standards; therefore, operational impacts would be ***less than significant***.

As documented above, implementation of **MM 4.13.1** through **MM 4.13.4** ensures that impacts associated with temporary construction noise and operational noise would be ***less than significant***.

**Question B**

Excessive vibration during construction occurs only when high vibration equipment (e.g., compactors, large dozers, etc.) are operated. The proposed project may require limited use of equipment with high vibration levels during construction. Potential effects of ground-borne vibration include perceptible movement of building floors, rattling windows, shaking of items on shelves or hangings on walls, and rumbling sounds. In extreme cases, vibration can cause damage to buildings. Both human and structural responses to ground-borne vibration are influenced by various factors, including ground surface, distance between the source and the receptor, and duration.

The most common measure used to quantify vibration amplitude is the peak particle velocity (PPV). PPV is a measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. Although there are no federal, state, or local regulations for ground-borne vibration, Caltrans has developed criteria for evaluating vibration impacts, both for potential structural damage and for human annoyance. The Caltrans Transportation and Construction Vibration Guidance Manual (2020), was referenced in the analysis of construction-related vibration impacts.

**Table 4.13-4** includes the potential for damage to various building types as a result of ground-borne vibration. Transient sources include activities that create a single isolated vibration event, such as blasting. Continuous, frequent, or intermittent sources include jack hammers, bulldozers, and vibratory rollers.

**TABLE 4.13-4  
Structural Damage Thresholds from Ground-Borne Vibration**

Structure Type	Vibration Level (Inches per Second PPV)	
	Transient Sources	Continuous/ Frequent/ Intermittent Sources
Older residential structures	0.5	0.3
Newer residential structures	1.0	0.5
Historic and some old buildings	0.5	0.25
Newer industrial/commercial buildings	2.0	0.5

*Source: Caltrans Transportation and Construction Vibration Guidance Manual, 2020.*

**Table 4.13-5** indicates the potential for annoyance to humans as a result of ground-borne vibration.

**TABLE 4.13-5  
Human Response to Ground-Borne Vibration**

Human Response	Vibration Level (Inches per Second PPV)	
	Transient Sources	Continuous/ Frequent/ Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.10
Disturbing	2.0	0.4

*Source: Caltrans Transportation and Construction Vibration Guidance Manual, 2020.*

**Table 4.13-6** indicates vibration levels for various types of construction equipment that may be used for the proposed project.

**TABLE 4.13-6  
Examples of Construction Equipment Ground-Borne Vibration**

Equipment Type	Inches per Second PPV at 25 feet
Bulldozer (small)	0.003
Bulldozer (large)	0.089
Jackhammer	0.035
Loaded trucks	0.076
Vibratory roller	0.210

*Source: Caltrans Transportation and Construction Vibration Guidance Manual, 2020.*

Vibration levels from construction equipment use at varying distances from the source can be calculated using the following formula:

$$PPV_{\text{Equipment}} = PPV_{\text{Ref}} \times (25/D)^n$$

In this equation,  $PPV_{\text{Ref}}$  = reference PPV at 25 feet,  $D$  = distance from equipment to the receiver in feet, and  $n = 1.1$  (the value related to the attenuation rate through ground). Based on this equation, in the worst-case scenario, a vibratory roller compacting asphalt at a distance of 25 feet from a residence would generate a PPV of 0.21 inches per second. Vibratory rollers are not expected to be used in graveled alleyways, which are within 15 feet of residences. At these locations, the worst-case scenario would be due to operation of a large bulldozer (or similar equipment), which would generate a PPV of 0.16 at a distance of 15 feet.

As shown in **Table 4.13-4**, vibration levels are not anticipated to be at a level that would cause structural damage. In addition, as shown in **Table 4.13-5**, these vibration levels would be strongly perceptible but would not rise to a level that would be considered disturbing.

Operation of the new aeration system at the WWTP could result in a permanent increase in groundborne vibration or groundborne noise due to the operation of mechanical equipment (e.g., pumps, blowers, fans, etc.). However, due to the distance between the WWTP and the nearest sensitive receptor ( $\pm 0.3$  miles), it is not expected that equipment that would be used at the WWTP would generate vibration that would be detectable at the nearest sensitive receptor. Therefore, impacts associated with vibration would be **less than significant**.

### Question C

A large portion of the project is located within the Fall River Mills Airport Planning Boundary, and the WWTP is located adjacent to the Airport. The project does not include any components that would result in the long-term exposure of people to excessive noise associated with the Airport.

Construction workers may be exposed to noise from the airport; however, workers are subject to OSHA noise exposure standards and must wear hearing protection when exposed to excessive noise. Therefore, impacts would be **less than significant**.

## CUMULATIVE IMPACTS

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As documented above, a temporary increase in daytime noise levels would occur during construction activities; however, **MM 4.13.1** through **MM 4.13.3** would minimize temporary noise impacts. **MM 4.13.4** ensures that operational noise levels comply with Shasta County noise standards. Other cumulative projects also must comply with the County's noise standards. With implementation of **MM 4.13.1** through **MM 4.13.4**, the proposed project's contribution to cumulative noise impacts would be less than significant.

## MITIGATION

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- MM 4.13.1** Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to between the daytime hours of 7:00 A.M. and 7:00 P.M., Monday through Saturday. Construction activities shall be prohibited on Sundays and federal/state recognized holidays. Exceptions to these limitations may be approved by the Fall River Valley CSD General Manager or his/her designee for activities that require interruption of utility services to allow work during low demand periods, or to alleviate traffic congestion and safety hazards.
- MM 4.13.2** Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.
- MM 4.13.3** Stationary construction equipment (generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses.
- MM 4.13.4** Sewer lift stations, emergency standby generators, the aeration system and associated equipment at the WWTP, building mechanical equipment, and other noise-generating stationary sources shall be designed to ensure that operational noise levels at nearby sensitive receptors do not exceed applicable Shasta County noise standards.

Noise attenuation may include, but not be limited to, installing equipment in an enclosure that provides adequate noise attenuation, selecting low noise-generating equipment, and use of sound-rated doors, windows, and vents.

## DOCUMENTATION

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## 4.14 POPULATION AND HOUSING

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY CONTEXT

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There are no federal, State, or local regulations pertaining to population or housing that apply to the proposed project.

### DISCUSSION OF IMPACTS

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#### Question A

A project would induce unplanned population growth if it conflicted with a local land use plan (e.g., a General Plan) and induced growth in areas that aren't addressed in a General Plan or other land use plan. Although the extension of the public sewer system could facilitate new construction on undeveloped parcels in the study area, further development would be in accordance with the growth projections identified in the Shasta County General Plan. Therefore, the proposed project would not induce unplanned population growth in the area, either directly or indirectly. There would be ***no impact***.

#### Questions B and C

No housing units would be demolished to accommodate the proposed improvements; therefore, there would be ***no impact***.

### CUMULATIVE IMPACTS

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As documented above, the proposed project would not induce substantial unplanned population growth in the area and would not directly or indirectly displace housing or people; therefore, it would not contribute to cumulative impacts related to population and housing.

### MITIGATION

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None necessary.

### DOCUMENTATION

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**Shasta County.** 2004. Shasta County General Plan.  
<https://www.shastacounty.gov/sites/default/files/fileattachments/planning/page/3048/updated-for-online-community-organization-and-development-pattern-2018-he-text-amendments.pdf>.  
 Accessed May 2022.

## 4.15 PUBLIC SERVICES

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

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY CONTEXT

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There are no federal, State, or local regulations pertaining to public services that apply to the proposed project.

### DISCUSSION OF IMPACTS

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#### Questions A through E

The proposed project does not include the construction of houses or businesses that would increase the number of residents in the area. In addition, as discussed in Section 4.14 under Question A, the proposed project would not induce unplanned population growth in the area. Therefore, the proposed project would not result in the need for new or physically altered governmental facilities; there would be **no impact**.

### CUMULATIVE IMPACTS

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As described above, the proposed project would not increase the demand for long-term public services; therefore, no cumulatively considerable impacts would occur.

### MITIGATION

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None necessary

### DOCUMENTATION

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**Shasta County.** 2004. Shasta County General Plan.

<https://www.shastacounty.gov/sites/default/files/fileattachments/planning/page/3048/updated-for-online-community-organization-and-development-pattern-2018-he-text-amendments.pdf>.

Accessed May 2022.

## 4.16 RECREATION

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## REGULATORY CONTEXT

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There are no federal, State, or local regulations pertaining to recreation that apply to the proposed project.

## DISCUSSION OF IMPACTS

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### Questions A and B

The proposed project does not include the construction of houses or businesses that would increase the number of residents in the area. In addition, as discussed in Section 4.14 under Question A, the proposed project would not induce unplanned population growth in the area, either directly or indirectly. Therefore, the proposed project would not result in an increased use of existing recreational facilities or require the construction or expansion of recreational facilities. There would be *no impact*.

## CUMULATIVE IMPACTS

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As stated above, the proposed project would not impact recreational facilities or require the construction or expansion of recreational facilities; therefore, no cumulatively considerable impacts would occur.

## MITIGATION

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None necessary

## DOCUMENTATION

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**Shasta County.** 2004. Shasta County General Plan.

<https://www.shastacounty.gov/sites/default/files/fileattachments/planning/page/3048/updated-for-online-community-organization-and-development-pattern-2018-he-text-amendments.pdf>.

Accessed May 2022.

## 4.17 TRANSPORTATION

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) (criteria for analyzing transportation impacts – vehicle miles traveled)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### REGULATORY CONTEXT

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There are no federal or local regulations pertaining to transportation/traffic that apply to the proposed project.

#### STATE

##### California Streets and Highways Code

California Streets and Highways Code §660 *et seq.* requires that an encroachment permit be obtained from Caltrans prior to the placement of structures or fixtures within, under, or over State highway right-of-way (ROW). This includes, but is not limited to, utility poles, pipes, ditches, drains, sewers, or other above-ground or underground structures.

##### CEQA Guidelines

SB 743 of 2013 (CEQA Guidelines §15064.3 *et seq.*) was enacted as a means to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHGs. Pursuant to SB 743, traffic congestion is no longer considered a significant impact on the environment under CEQA. The new metric bases the traffic impact analysis on vehicle-miles travelled (VMT).

VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT, including whether to express the change in absolute terms, per capita, per household, or in any other measure.

### DISCUSSION OF IMPACTS

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#### Questions A, C, and D

The project does not include any components that would conflict with a program, plan, ordinance, or policy addressing the transportation system; however, construction activities could temporarily impede use of roadways as well as bicycle and pedestrian facilities.

The project does not involve a use or activity that could increase the potential for traffic hazards or result in inadequate emergency access in the long term. Work within public roads could increase traffic hazards and could result in access issues to properties adjacent to the roadway. However, as

stated in Section 4.9 (Hazards and Hazardous Materials) under Question F, a traffic control plan that addresses the needs of all road users (motorists, bicyclists, and pedestrians) must be prepared in accordance with the MUTCD. The plan must identify protective measures to ensure the safety of road users, workers, and emergency responders. The plan would identify the location of the work, affected roads, and types and locations of temporary traffic control measures (i.e., signs, cones, flaggers, etc.) that would be implemented during the work.

Because no permanent impacts to the circulation system would occur, and safety measures would be employed to safeguard travel by the general public and emergency response vehicles during construction, impacts would be ***less than significant***.

#### **Question B**

The proposed project does not include the construction of housing or commercial/industrial development that would cause a permanent increase in traffic or VMT in the area. There would be an increase in VMT due to construction workers traveling to and from the project site; however, this is a temporary impact and would cease at completion of the project. Therefore, impacts related to VMT would be ***less than significant***.

### **CUMULATIVE IMPACTS**

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As documented above, the proposed project would not result in a permanent increase in traffic and would not conflict with programs, plans, ordinances, or policies addressing the circulation system. Further, the project would not permanently increase hazards due to design features or incompatible uses.

There would be a temporary increase in traffic associated with construction workers and equipment during construction. However, no concurrent construction activities near the roadway network are anticipated. Temporary traffic control for all projects that require work in the public right-of-way is required and must adhere to the procedures, methods, and guidance given in the current edition of the MUTCD. In addition, construction traffic is a temporary impact that would cease at completion of the project; therefore, the project's transportation-related impacts would not be cumulatively considerable.

### **MITIGATION**

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None necessary.

### **DOCUMENTATION**

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**California Department of Transportation.** 2021. California Manual on Uniform Traffic Control Devices. <https://dot.ca.gov/programs/safety-programs/camutcd>. Accessed May 2022.

## 4.18 TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code (PRC) 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:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. A resource listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC §5020.1(k)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC §5024.1? In applying the criteria set forth in subdivision (c) of PRC §5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### REGULATORY CONTEXT

There are no federal or local regulations pertaining to tribal cultural resources that apply to the proposed project.

#### STATE

##### California Environmental Quality Act

Assembly Bill 52 of 2014 (Public Resources Code [PRC] §21084.2) establishes that “a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.” In order to determine whether a project may have such an effect, a lead agency is required to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if:

1. The tribe requested to the lead agency, in writing, to be informed through formal notification of proposed projects in the geographical area; and
2. The tribe responds, in writing, within 30 days of receipt of the formal notification and requests the consultation.

The consultation must take place prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report. Pursuant to PRC §21084.3, lead agencies must, when feasible, avoid damaging effects to a tribal cultural resource and must consider measures to mitigate any identified impact.

PRC §21074 defines “tribal cultural resources” as either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the CRHR; or are included in a local register of historical resources as defined in PRC §5020.1(k).



A historical resource described in §21084.1, a unique archaeological resource as defined in §21083.2(g), or a “nonunique archaeological resource” as defined in §21083.2(h) may also be a tribal cultural resource if it meets this criterion.

2. A resource determined by the lead agency, taking into consideration the significance of the resource to a California Native American tribe, to be significant pursuant to criteria set forth in PRC §5024.1(c).

## DISCUSSION OF IMPACTS

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### Questions A and B

See discussion in Section 1.7 (Tribal Cultural Resources Consultation) and Section 4.5 (Cultural Resources) under Questions A and B.

In response to comments from the Pit River Tribe, **MM 4.5.3** is included to require that the tribe be notified a minimum of two weeks in advance of any ground-disturbing activities and offered the opportunity for a tribal monitor to be present. **MM 4.5.4** requires that in the event that cultural resources or human remains of Native American descent are identified during earth disturbance, the Pit River Tribe shall be requested to provide a Native American monitor to observe subsequent earth-disturbing construction activities on potentially sensitive lands. Implementation of **MM 4.5.3** and **MM 4.5.4** ensures that impacts on tribal cultural resources are *less than significant*.

## CUMULATIVE IMPACTS

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Cumulative projects in the vicinity of the project area have the potential to impact tribal cultural resources. Tribal cultural resources are afforded special legal protections designed to reduce the cumulative effects of development. Potential cumulative projects and the proposed project would be subject to the protection of tribal cultural resources afforded by PRC §21084.3. Given the non-renewable nature of tribal cultural resources, any impact to tribal cultural sites, features, places, landscapes, or objects could be considered cumulatively considerable. As discussed above, no cultural resources of significance to a California Native American tribe were identified within the project area. In addition, **MM 4.5.3** and **4.5.4** provide for monitoring by the Pit River Tribe; therefore, the proposed project would have less than significant cumulative impacts to tribal cultural resources.

## MITIGATION

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Implementation of **MM 4.5.3** and **MM 4.5.4**.

## DOCUMENTATION

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**ENPLAN**. 2023. Cultural Resources Inventory: Fall River Valley Community Services District Wastewater System Expansion Project. Confidential document on file at NEIC/CHRIS.

## 4.19 UTILITIES AND SERVICE SYSTEMS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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 of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY CONTEXT

There are no federal or local regulations pertaining to utilities and service systems that apply to the proposed project.

#### STATE

##### California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act (CIWMA) of 1989 is designed to increase landfill life and conserve other resources through increased source reduction and recycling. Goals of the CIWMA include diverting approximately 50 percent of solid waste from landfills and identifying programs to stimulate local recycling in manufacturing and the purchase of recycled products. The CIWMA requires cities and counties to prepare Solid Waste Management Plans and Source Reduction and Recycling Elements to implement CIWMA goals

### DISCUSSION OF IMPACTS

#### Question A

As discussed in Section 4.14 under Question A, it is not anticipated that the project would significantly influence development in the FRVCSD service area. Therefore, other than the improvements analyzed in this Initial Study (Section 3.2, Project Components/Physical Improvements), the proposed project would not result in the need for new or expanded water, natural gas, or telecommunication facilities. In addition, it is not anticipated that any water, natural gas, or telecommunications facilities would need to be relocated to accommodate the proposed project. Therefore, impacts would be ***less than significant***.

## Question B

Relatively small amounts of water would be used during project construction for dust control, but this is a temporary impact. The proposed project would not induce population growth in the area. Therefore, the proposed project would not result in an increased demand for water in the long-term; there would be ***no impact***.

## Question C

Expansion of FRVCSD's existing wastewater collection system would result in increased flows to the WWTP. The WWTP consists of six clay-lined oxidation/evaporation ponds that treat the FRVCSD's raw wastewater. Typically, only two of the ponds receive wastewater, with the northeastern pond only receiving effluent during extremely wet years. Although flows to the WWTP would increase with implementation of the project, there would be no need to expand the existing ponds to accommodate the increased flows.

In order to accommodate the increased flows, LS 2 would be upgraded by replacing existing pumps, motors, electrical, and piping with higher capacity equipment, and the existing 4-inch-diameter force main between LS 2 and the WWTP would be replaced with a 6-inch-diameter force main in the same location. Completion of the proposed improvements ensures that the FRVCSD has adequate capacity in its wastewater system to serve the project's projected demand. There would be ***no impact***.

## Questions D and E

The proposed project would not result in a long-term demand for additional solid waste services. Solid waste would be generated during construction, mainly from removal of pavement in public road ROWs to accommodate the pipeline improvements.

Construction debris would be disposed of at a solid waste facility that is licensed to accept construction and demolition waste, such as the Anderson Landfill in Anderson, California. According to CalRecycle, the design capacity of the Anderson Landfill is 16,353,000 cubic yards. As of July 31, 2017, the remaining capacity was 11,014,860 cubic yards, and the landfill's estimated closure year was 2093. The construction contractor would be responsible for disposing of all construction waste. The FRVCSD would ensure through contractual obligations that the contractor complies with all federal, State, and local statutes related to solid waste disposal. Therefore, impacts would be ***less than significant***.

## CUMULATIVE IMPACTS

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Other than the wastewater collection and treatment improvements addressed in this Initial Study, utility and service systems in the area would not experience a permanent increase in demand for services over existing conditions. Although solid waste would be generated during construction, no permanent increase in solid waste generation would occur. Therefore, the proposed project would have less-than-significant cumulative impacts to utility and service systems.

## MITIGATION

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None necessary.

## DOCUMENTATION

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**CalRecycle**. 2018. Five-Year Permit Review Report, Anderson Landfill, Inc. (SWIS 45-AA-0020). <https://secure.calrecycle.ca.gov/SWISDocument/Document/Details/342197>. Accessed December 2022.

## 4.20 WILDFIRE

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

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire, or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY CONTEXT

#### FEDERAL

There are no federal regulations pertaining to wildfire that apply to the proposed project.

#### STATE

##### California Department of Forestry and Fire Protection (CAL FIRE)

The Bates Bill (AB 337), enacted in 1992, required CAL FIRE to work with local governments to identify high fire hazard severity zones throughout each county in the State. CAL FIRE adopted Fire Hazard Severity Zone (FHSZ) Maps for State Responsibility Areas (SRA) in November 2007. Pursuant to California Government Code §51175-51189, CAL FIRE also recommended FHSZs for Local Responsibility Areas (LRA). Over the years, CAL FIRE has updated the maps and provided new recommendations to local governments based on fire hazard modeling.

The fire hazard model considers wildland fuels (natural vegetation that burns during the wildfire); topography (fires burn faster as they burn up-slope); weather (fire burns faster and with more intensity when air temperature is high, relative humidity is low, and winds are strong); and ember production and movement (how far embers move and how receptive the landing site is to new fires). The model recognizes that some areas of California have more frequent and severe wildfires than other areas.

##### California Fire Code

California Fire Code, Part 9, Chapter 49 (Wildland-Urban Interface Fire Areas), and California Building Code Chapter 7A (Materials and Construction Methods for Exterior Wildfire Exposure) include standards for new construction in Wildland-Urban Interface Fire Areas (fire hazard severity zones). The purpose of the standards is to prevent a building from being ignited by flying embers that can travel as much as a mile away from a wildfire and to contribute to a systematic reduction in fire-related losses through the use of performance and prescriptive requirements.

## LOCAL

### Shasta County

The Shasta County General Plan includes the following Objective and Policy that apply to the proposed project:

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#### Chapter 5.6, Hazardous Materials; Chapter 5.4, Fire Safety and Sheriff Protection

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<b>Objective:</b>	FS-1	Protect development from wildland and non-wildland fires by requiring new development projects to incorporate effective site and building design measures commensurate with level of potential risk presented by such a hazard and by discouraging and/or preventing development from locating in high risk fire hazard areas.
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<b>Policy</b>	FS-a	All new land use projects shall conform to the County Fire Safe Standards.
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## DISCUSSION OF IMPACTS

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According to FHSZ maps prepared by CAL FIRE, the majority of the improvements would occur within a Local Responsibility Area (LRA). The Country Club Subdivision and surrounding area is identified as being in a State Responsibility Area (SRA) High Fire Hazard Severity Zone (FHSZ). No other High or Very High FHSZs are identified in the project area.

### Question A

See discussion in Section 4.9 under Question F. The proposed project does not involve a use or activity that could interfere with long-term emergency response or emergency evacuation plans for the area. Although a temporary increase in traffic could occur during construction and could interfere with emergency response times, construction-related traffic would be minor due to the overall scale of the construction activities. Temporary traffic control during completion of activities that require work in the public road ROW is required and must adhere to the procedures, methods and guidance given in the current edition of the MUTCD. Implementation of traffic control measures during construction ensures impacts are **less than significant**.

### Questions B and C

The majority of improvements would occur in paved roads and graveled alleyways in relatively flat areas with low fire hazard risk. The proposed project would not involve construction of public roads or otherwise intrude into natural spaces in a manner that would increase wildfire hazards in the long term, and would not require construction of fuel breaks, installation of emergency water sources, or other fire prevention/suppression infrastructure.

There are no features in the study area, such as slope, prevailing winds, or other factors that would exacerbate wildfire risks in a manner that would expose people living and working in the area to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire. As stated in Section 4.9 (Hazards and Hazardous Materials), contractors would be required to implement safeguards during construction to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment, and promote prompt response to fire emergencies. Therefore, impacts would be **less than significant**.

### Question D

The severity of post-fire risks is based on several factors, including the intensity of the fire, the slope and stability of the burned area, physical properties of the soils, and the intensity of post-fire precipitation. With the exception of the new lift stations and blower building at the WWTP, proposed improvements would be subsurface and would not be exposed to significant post-fire risks.

The lift stations and blower building would be installed in relatively level areas with little potential for impacts associated with downslope or downstream flooding or landslides that could result from runoff, post-fire slope instability, or drainage changes. Therefore, there would be **no impact** associated with post-fire impacts.

## CUMULATIVE IMPACTS

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The proposed project and cumulative projects must implement temporary traffic control measures (i.e., signs, cones, flaggers, etc.) to ensure that emergency response vehicles are not hindered by construction activities. Because all projects must provide adequate access during construction, there would be no cumulative impact even if more than one project were under construction at the same time.

In the long term, the proposed project would not contribute individually or cumulatively to increased risks of wildfire, effects of fire prevention/suppression infrastructure, or post-fire hazards. Although cumulative wildfire risks could occur during construction, compliance with existing regulations adequately minimizes such risks. Therefore, the project's contribution to cumulative impacts would be less than significant.

## MITIGATION

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None necessary.

## DOCUMENTATION

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**California Department of Forestry and Fire Protection (CAL FIRE).** 2022. Fire Hazard Severity Zone Map Viewer. <https://egis.fire.ca.gov/FHSZ/>. Accessed May 2022.

**Shasta County.** 2004. Shasta County General Plan, Chapter 5.4 (Fire Safety and Sheriff Protection). <https://www.shastacounty.gov/sites/default/files/fileattachments/planning/page/3048/54firesafety.pdf>. Accessed May 2022.



## 4.21 MANDATORY FINDINGS OF SIGNIFICANCE

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless 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 rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### DISCUSSION OF IMPACTS

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#### Question A

As discussed in Section 4.4, the proposed project could result in possible disturbance of nesting birds (if present), the introduction and spread of noxious weeds during construction, possible impacts on wetlands and/or other waters of the U.S./State, and impacts on cultural resources and tribal cultural resources. However, as identified in Section 4.4 (Biological Resources) and Section 4.5 (Cultural Resources), mitigation measures are included to reduce all potential impacts to a **less-than-significant** level.

#### Question B

The potential cumulative impacts of the proposed project have been analyzed within the discussion of each environmental resource section above. The mitigation measures identified in Section 1.10 reduce all potential impacts to a **less-than-significant** level.

#### Question C

As discussed in the applicable environmental resource sections above, the proposed project could result in adverse effects on human beings due to temporarily increased air emissions, and temporarily increased noise and vibration levels. However, as identified in Section 4.3 (Air Quality) and Section 4.13 (Noise), mitigation measures are included to reduce all potential impacts to a **less-than-significant** level.

## SECTION 5.0 LIST OF PREPARERS

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### ENPLAN

Donald Burk ..... Environmental Services Manager  
Carla L. Thompson, AICP ..... Senior Environmental Planner  
Kiara Cuerpo-Hadsall ..... Environmental Planner  
Hannah Raab ..... Environmental Planner  
Sabrina Rouse ..... Environmental Planner  
Allison Loveless ..... Environmental Scientist  
Jacques Kerkhove-Peltier ..... Archaeologist  
Evan Wiant ..... Archaeologist

### Fall River Valley Community Services District

Cecil Ray ..... District Manager

### PACE Engineering

Paul Reuter, P.E. ..... Managing Engineer/President  
Keith Krantz, P.E. ..... Senior Engineer

## SECTION 6.0 ABBREVIATIONS AND ACRONYMS

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AB	Assembly Bill
AQAP	Air Quality Attainment Plan
APE	Area of Potential Effects
ATS	Automatic Transfer Switch
AUM	Animal Unit Month
BAMM	Best Available Mitigation Measures
BMP	Best Management Practice
BSR	Biological Study Report
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention Program
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	Criteria Air Pollutants
CARB	California Air Resources Board
CASGEM	California Statewide Groundwater Elevation Monitoring
CBSC	California Building Standards Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGC	California Government Code
CGS	California Geological Survey
CH <sub>4</sub>	Methane
CHRIS	California Historical Resources Information System
CIWMA	California Integrated Waste Management Act
CMU	Concrete Masonry Unit
CNDDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2e</sub>	Carbon Dioxide Equivalent
County	Shasta County
CRHR	California Register of Historical Resources
CRI	Cultural Resources Inventory
CSD	Community Services District
CVRWQCB	Central Valley Regional Water Quality Control Board

CWA	Clean Water Act
CWSRF	Clean Water State Revolving Fund
CY	Cubic Yards
dB	Decibels
dBA	A-weighted decibels
DOC	Department of Conservation
DTSC	California Department of Toxic Substances Control
EFH	Essential Fish Habitat
EO	Executive Order
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Act
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FMMP	California Farmland Mapping and Monitoring Program
FRVCSD	Fall River Valley Community Services District
GPD	Gallons per Day
GHG	Greenhouse Gas Emissions
GSAs	Groundwater Sustainability Agencies
GSPs	Groundwater Sustainability Plans
GWP	Global Warming Potential
H <sub>2</sub> S	Hydrogen Sulfide
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
mg/m <sup>3</sup>	Milligrams per Cubic Meter
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MS4	Small Municipal Separate Storm Sewer Systems
MT	Metric Ton
MUTCD	California Manual on Uniform Traffic Control Devices
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan

NEIC	Northeast Information Center of the California Historical Resources Information System
NEHRA	National Earthquake Hazards Reduction Act
NEMA	National Electrical Manufacturers Association
NF <sub>3</sub>	Nitrogen Trifluoride
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
N <sub>2</sub>	Nitrogen
N <sub>2</sub> O	Nitrous Oxide
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Oxides of Nitrogen
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPPA	California Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSVAB	Northern Sacramento Valley Air Basin
NSVPA	Northern Sacramento Valley Planning Area
NWP	Nationwide Permit
O <sub>3</sub>	Ozone
OHWM	Ordinary High Water Mark
OSHA	Occupational Safety and Health Act
Pb	Lead
PF	Public Facilities
PFC	Perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM <sub>2.5</sub>	Particulate Matter, 2.5 microns in size
PM <sub>10</sub>	Particulate Matter, 10 microns in size
PPB	Parts per Billion
PPM	Parts per Million
PPV	Peak Particle Velocity
PRC	Public Resources Code
Project	Fall River Valley CSD McArthur Sewer Main Improvements
PVC	Polyvinyl Chloride
RCAP	Regional Climate Action Plan
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
ROG	Reactive Organic Gases
ROW	Right-of-Way
RWQCB	Regional Water Quality Control Board

SAA	Streambed Alteration Agreement
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCAQMD	Shasta County Air Quality Management District
SCC	Shasta County Code
SCHMRT	Shasta-Cascade Hazardous Materials Response Team
SF <sub>6</sub>	Sulfur Hexafluoride
SGMA	Sustainable Groundwater Management Act
SHMA	California Seismic Hazards Mapping Act
SHPO	State Historic Preservation Officer
SMM	Standard Mitigation Measures
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SO <sub>2</sub>	Sulfur Dioxide
SO <sub>4</sub>	Sulfates
SRA	State Responsibility Area
SSC	Species of Special Concern
STEP	Septic Tank Effluent Pump
SUSWMP	Standard Urban Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SVAQEPP	Sacramento Valley Air Quality Engineering and Enforcement Professionals
TAC	Toxic Air Contaminants
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VMT	Vehicle Miles Travelled
WDRs	Waste Discharge Requirements
WWMP	FRVCSD Wastewater Facilities Master Plan
WWTP	Wastewater Treatment Plant
µg/m <sup>3</sup>	Micrograms per Cubic Meter



# Appendix A

## CalEEMod Emissions Reports

# **Appendix B**

## **Biological Study Report Fall River Valley Community Services District Wastewater System Expansion Project**

# **Appendix C**

## **Field Survey Coverage Maps**

### **Biological and Cultural Resources**

# Appendix D

## Wetlands and Other Waters of the U.S. and/or State (Map Exhibits)

## **Appendix E**

**Letter from Federal Aviation Administration to  
Shawn Ankeny, Fall River Mills Airport Manager,  
November 16, 2022**