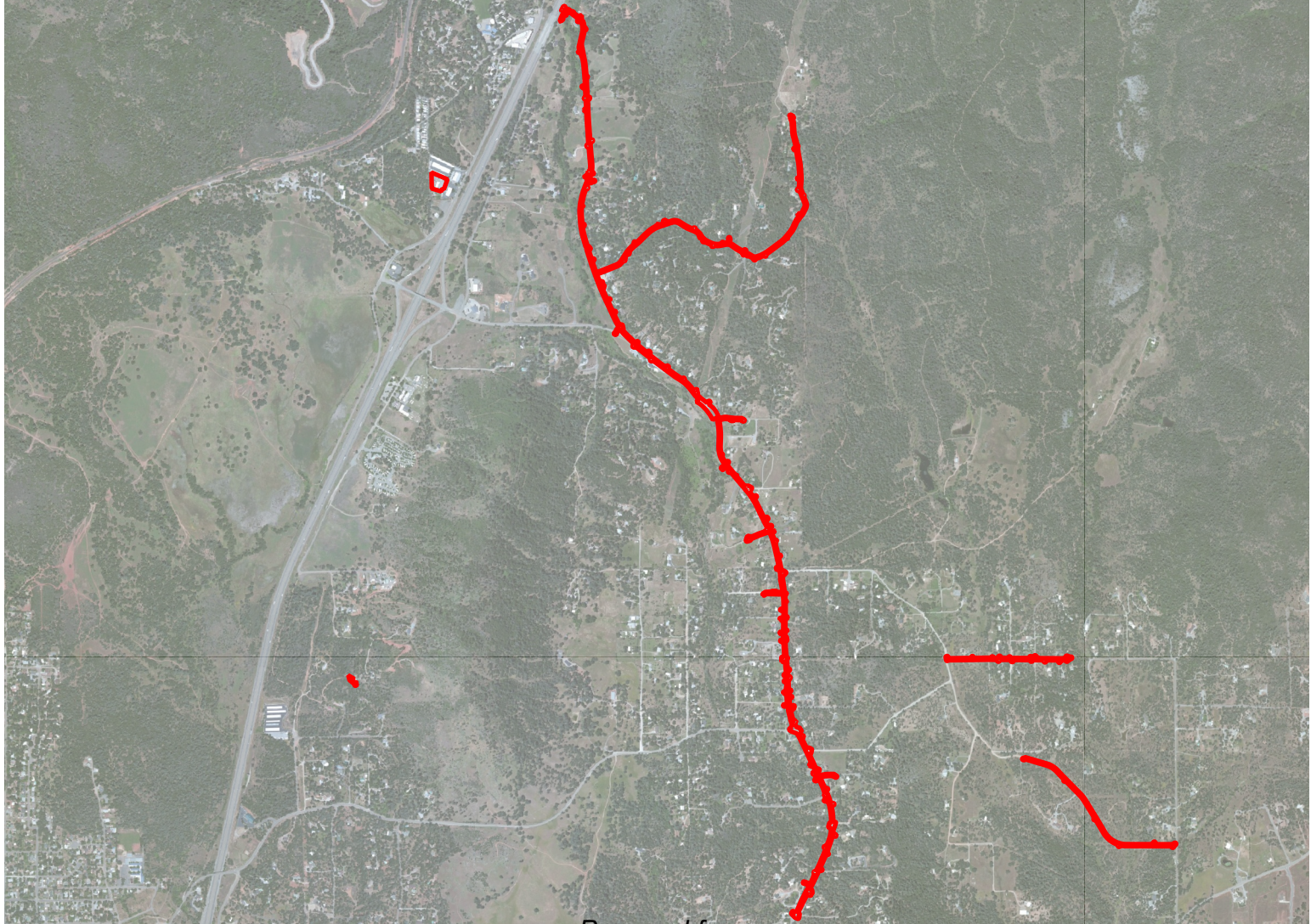


PROPOSED MITIGATED NEGATIVE DECLARATION AND INITIAL STUDY

Mountain Gate Community Services District Water System Improvements Project



Prepared for:

Mountain Gate Community Services District

August 2021

32-65

ENPLAN

3179 Bechelli Lane Suite 100
Redding, CA 96002

PROPOSED MITIGATED NEGATIVE DECLARATION

LEAD AGENCY:	Mountain Gate Community Services District
PROJECT PROPONENT:	Mountain Gate Community Services District
PROJECT NAME:	Water System Improvements Project
PROJECT SUMMARY:	The proposed project includes improvements to the Mountain Gate Community Services District's (MGCSD) water system. Improvements include replacing/upsizing existing water mains and associated water services, installing a new water main, installing/replacing fire hydrants, replacing/installing Pressure Reducing Valve stations and associated solar panels, and installing a new emergency intertie. The purpose of the proposed project is to replace aging infrastructure, achieve adequate fire flows, and ensure a safe and reliable potable water supply for customers in the MGCSD's water service area.
LOCATION:	The project is located within the unincorporated community of Mountain Gate in Shasta County, generally south/southeast of Lake Shasta and north and east of the City of Shasta Lake. <i>See Figure 1 of the Initial Study.</i>

Findings / Determination

As documented in the Initial Study, project implementation could result in possible effects to special-status wildlife species and their habitat, disturbance of nesting migratory birds (if present), impacts to cultural resources and tribal cultural resources (if present), the introduction and spread of noxious weeds during construction, temporarily increased air emissions, and temporarily increased noise and vibration levels.

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 presented in Section 1.10 of the Initial Study. Because the MGCSD 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 Mountain Gate Community Services District on _____, 2021.

INITIAL STUDY

WATER SYSTEM IMPROVEMENTS PROJECT

MOUNTAIN GATE COMMUNITY SERVICES DISTRICT

SHASTA COUNTY, CALIFORNIA

LEAD AGENCY:



14508 Wonderland Blvd.
Redding, CA 96003
530.275.3002

PREPARED BY:

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August 2021

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SECTION 1.0 INTRODUCTION

1.1 PROJECT SUMMARY

Project Title:	Water System Improvements Project
Lead Agency Name and Address:	Mountain Gate Community Services District 14508 Wonderland Boulevard Redding, CA 96003
Contact Person and Phone Number:	Jeff Cole, District Manager 530.275.3002
Lead Agency's Environmental Consultant:	ENPLAN 3179 Bechelli Lane, Suite 100 Redding, CA 96002

1.2 PURPOSE OF STUDY

The Mountain Gate Community Services District (MGCSD), 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 Water System Improvements Project (project). Details about the proposed project are included in Section 3.0 (Project Description) of this Initial Study.

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 MGCSD intends to apply for funding through the State Water Resources Control Board (SWRCB) Drinking Water State Revolving Fund (DWSRF) 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 Vicinity Map, the unincorporated community of Mountain Gate is located generally south of Lake Shasta, north and east of the City of Shasta Lake. Improvements would occur both on the east and west sides of Interstate 5 (I-5). As shown in **Figure 2**, proposed improvements on the west side of I-5 would occur at the MGCSD Corporation Yard, 7000 Wonderland Boulevard. Proposed improvements on the east side of I-5 would occur in the public road rights-of-way (ROW) of Old Oregon Trail North, Old Oregon Trail, Copper Canyon Road, Grande Vista Lane, Lazy J Lane, Welbula Drive, El Teda Lane, Casa Drive, and Sunrise Drive, and on the MGCSD South Water Tank site. Some of the waterline improvements would occur in public utility easements on private property.

Temporary staging of construction materials and equipment would occur off of Old Oregon Trail North between Grande Vista Lane and Coyote Canyon Road, and off of Holiday Road near the bridge over West Fork Stillwater Creek at the northern extent of the waterline improvements. Staging would also occur at the MGCSD Corporation Yard and in the affected road ROW throughout the project area. No physical improvements are needed to establish the staging areas.

The proposed project is located in Sections 16, 21, 27, 28, and 29, Township 33 North, Range 4 West, of the U.S. Geological Survey (USGS) Project City 7.5-minute quadrangle. Latitude 40° 41' 40" N; Longitude -122° 19' 15" W (centroid).

Assessor's Parcel Numbers. Corporation Yard: 307-130-006; South Water Tank Site: 007-460-013; Water Main Improvements: Caltrans and Shasta County road ROW and public utility easements.

Path: N:\companyfiles\01-Jobs Active\032-65 PACE - Mt. Gate CSD Water System Improvements\3-Project GIS\3-Map Documents\CEQA\Fig1_ProjVicinity_101520.mxd

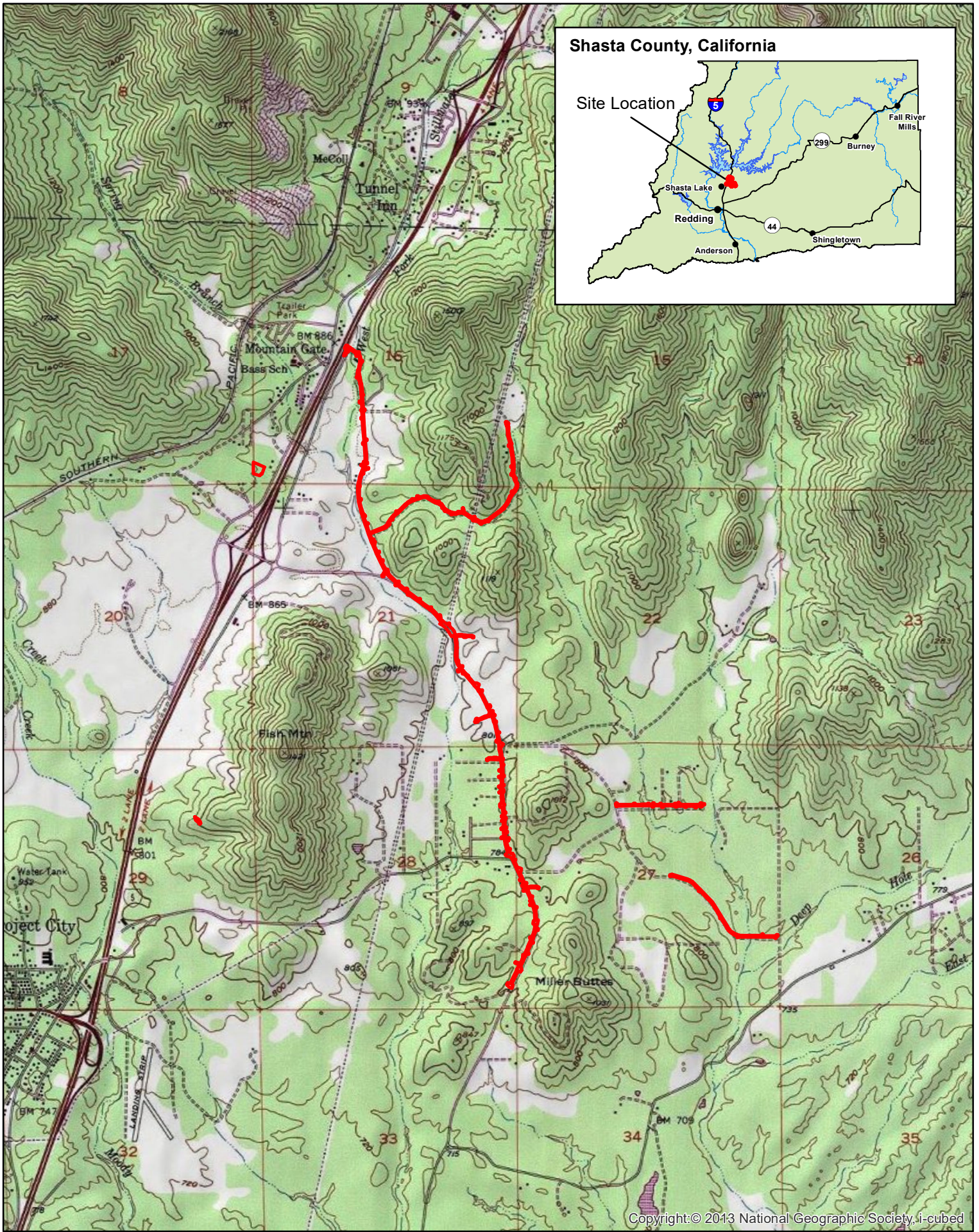


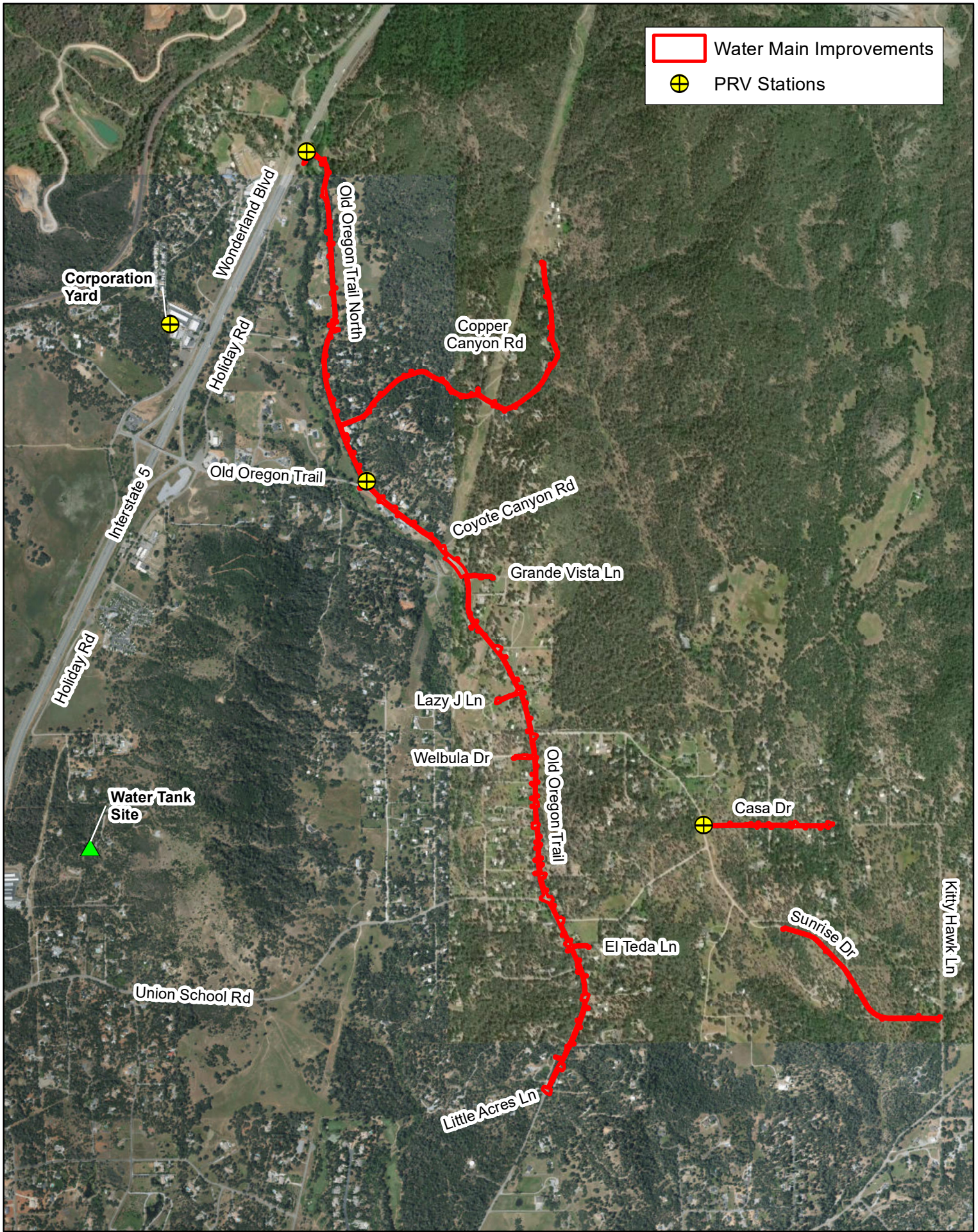
Figure 1

Project Vicinity Map



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All depictions are approximate. Not a survey product. 10.15.20





All depictions are approximate. Not a survey product. 02.17.21



Figure 2
Improvement Locations

1.6 ENVIRONMENTAL SETTING

General Plan Designations:	Waterline Improvements and Water Tank Site: Rural Residential (RA) Corporation Yard: Commercial (C)
Zoning:	Water Tank Site and Corporation Yard: Public Facilities (PF) Waterline improvements would occur in areas zoned Rural Residential (RR), RR-Individual Lot Minimum Area (RR-BSM), RR- Mobile Homes (RR-T), and Open Space (OS).
Surrounding Land Uses:	Land uses surrounding the Corporation Yard include I-5 to the east, undeveloped land to the west, a mobile home park to the northwest, a parking lot and commercial structure to the south, and a storage facility to the north. The District's offices and fire station are located on the same property as the Corporation Yard. Land uses on the east site of I-5 in the study area include low-density single-family residences and undeveloped land.
Topography:	Elevations in the study area range between ± 710 feet and $\pm 1,000$ feet above sea level. The study area is characterized by gently rolling terrain, and the overall topographical gradient slopes gradually downward toward the south and southeast.
Plant Communities/Wildlife Habitats:	Habitat types in the study area include riverine, oak/pine woodland, and urban. Riverine habitat includes the West Fork of Stillwater Creek, Spring Branch Creek, Deep Hole Creek, and several unnamed ephemeral and intermittent streams that are ultimately tributary to Stillwater Creek. Representative trees and shrubs in the oak/pine woodland include blue oak, black oak, interior live oak, gray pine, ponderosa pine, white-leaf manzanita, buckbrush, coffeeberry, and redbud, interspersed with a variety of annual grasses. The urban community includes commercial development along Wonderland Boulevard on the west side of I-5 and rural residential uses throughout the study area on the east side of I-5 and includes numerous ornamental/horticultural trees interspersed with native species. <i>See Section 4.4 (Biological Resources)</i>
Climate:	The study area is characterized by a Mediterranean climate with cool, wet winters and hot, dry summers. The average annual temperature is about 75 degrees Fahrenheit ($^{\circ}$ F). Monthly mean maximum temperatures range from a high of 95° F in July to a low of 31° F in January. Daily high temperatures commonly exceed 100° F during the summer. Precipitation is about 63 inches per year.

1.7 TRIBAL CULTURAL RESOURCES CONSULTATION

Public Resources Code (PRC) \S 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 \S 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 the District, as of January 1, 2021, no tribes have requested formal notification of proposed projects in the geographical area.

As discussed in Section 4.5, on May 14, 2020, ENPLAN contacted Native American tribes that were identified by the Native American Heritage Commission (NAHC) with a request to provide comments on the proposed project. Follow-up e-mails and telephone calls were placed on June

1, 2020, to the tribal members that were previously identified by the NAHC. Kelli Hayward and Brenda Hogan with the Wintu Tribe of Northern California responded and requested additional information on the proposed project, including a map showing where improvements would occur. The draft cultural resources inventory report was submitted to the commenters on March 11, 2021. Kelli Hayward responded with a request that either a Native American monitor be present during construction or that appropriate construction personnel obtain cultural resources training prior to initiating work. A mitigation measure was subsequently added to the report and to this Initial Study requiring cultural resources training for construction personnel.

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.

Mountain Gate 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.

U.S. Army Corps of Engineers:

- Section 404 Permit under the Federal Clean Water Act if, at creek crossings, pipes are installed using open-cut trenching (see discussion in Section 3.2).

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

- Coverage under the NPDES permit for *Discharges of Storm Water Runoff Associated with Construction Activity* (currently Order No. 2009-009-DWQ, amended by 2010-0014-DWQ & 2012-0006-DWQ). Permit coverage may be obtained by submitting a Notice of Intent 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.
- Section 401 Water Quality Certification and Report of Waste Discharge (or waiver) if, at creek crossings, pipes are installed using open-cut trenching (see discussion in Section 3.2).
- If construction dewatering activities result in the direct discharge of relatively pollutant-free wastewater, coverage under CVRWQCB General Order R5-2016-0076-01 (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.

California Department Fish and Wildlife:

- Issuance of a Section 1600 Lake or Streambed Alteration Agreement if, at creek crossings, pipes are installed using open-cut trenching (see discussion in Section 3.2).

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

- Due to federal permits for the proposed 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 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 type="checkbox"/> Geology and Soils | <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Mandatory Findings of Significance |

1.10 SUMMARY OF MITIGATION MEASURES

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

AIR QUALITY

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. This provision is enforced by local law enforcement agencies.
- g. Paved streets in and adjacent to the construction site shall be swept or washed at the end of the day 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.

BIOLOGICAL

MM 4.4.1 Construction activities within the ordinary high-water mark of streams shall be limited to the period between June 1 and October 31, or as may otherwise be specified through jurisdictional permits/certifications issued by the California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and/or Regional Water Quality Control Board. If work is proposed outside of the agency-approved work windows, the Mountain Gate Community Services District shall obtain approval from those agencies prior to conducting such work, and shall implement any additional measures that may be required.

MM 4.4.2 Loss of riparian habitat along drainages shall be minimized to the extent feasible. Measures to be taken to minimize such loss include the following:

- Minimize the construction disturbance to riparian habitat along drainage systems through careful pre-construction planning.
- Install high-visibility fencing, flagging, or other markers along the outer edges of the construction zone where needed to prevent accidental entry into riparian habitat.
- Stockpile equipment and materials outside of riparian habitat, in the designated staging areas.
- Prune any riparian plants at ground level where feasible (as opposed to mechanically removing the entire plant and root system) in temporary use areas, which will promote regeneration from the root systems.

MM 4.4.3 The unavoidable removal of riparian vegetation shall be offset by revegetating the banks of West Fork Stillwater Creek with woody riparian species native to the immediate area (e.g., willow species). Stem cuttings or rooted plants shall be outplanted into the pre-project riparian zone during the fall/winter season immediately following installation of the water main through West Fork Stillwater Creek, after the soil has been thoroughly moistened by fall rains. Additional riparian planting specifications are provided in the Biological Study Report.

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 edges of the construction zone adjacent to the seasonal wetland on Welbula Lane. The fencing location shall be determined by a qualified biologist in consultation with the project engineer and MGCSD. 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 on Welbula Lane to ensure 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.

MM 4.4.7 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, 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 to the California Department of Fish and Wildlife 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.

CULTURAL

MM 4.5.1 Prior to commencement of any earth disturbance (e.g., clearing, grading, trenching, etc.), all construction personnel participating in the earth-disturbing activities and their supervisors shall receive training regarding cultural and tribal cultural resources that may be present on the project site. Training shall be provided by the Wintu Tribe of Northern California or, if tribal representatives are not available, by a qualified archaeologist. At a minimum, the training shall include a discussion of pertinent laws protecting cultural and tribal cultural resources, examples of resources that could be encountered during project construction, and procedures to be followed if resources are found. The latter shall include familiarity with conditions requiring pause of work, notifications to be made if cultural materials or human remains are encountered, and dignity/respect training.

If new personnel are added to the project, the District shall ensure that they receive the mandatory training before starting work. The initial training session may be videotaped and presented to new personnel to satisfy the sensitivity training requirement. If individuals can provide documentation of cultural resources training within the past two years, recertification is not warranted.

MM4.5.2 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 Mountain Gate 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 Mountain Gate CSD prior to resuming construction.

MM 4.5.3 In the event that human remains are encountered during construction activities, the Mountain Gate 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.

NOISE

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 Mountain Gate 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.

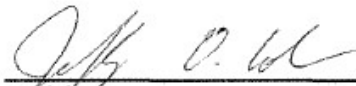
TRIBAL CULTURAL RESOURCES

Implementation of **Mitigation Measures MM 4.5.1** through **MM 4.5.3**.

SECTION 2.0 CEQA DETERMINATION

On the basis of this initial evaluation:

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



Jeff Cole
District Manager

7-29-2021

Date

SECTION 3.0 PROJECT DESCRIPTION

3.1 PROJECT BACKGROUND, NEED, AND OBJECTIVES

The Mountain Gate Community Services District (MGCSD) was established in May 1956 as an independent special district to provide water to customers in the Mountain Gate area of Shasta County. Fire protection and emergency services were initiated in 1966. The water treatment, storage, and distribution facilities were completed in 1971. The MGCSD encompasses ±3,945 acres (6.2 square miles) and serves a population of ±1,930 (2012 Census Data).

The water system consists of a Water Treatment Plant (WTP), located at the northern end of the MGCSD water service area; five treated-water storage reservoirs totaling 1.16 MG of storage; a 12-inch transmission main; and 8-inch and smaller steel, asbestos-cement, PVC, and ductile iron pipelines. There were 670 water meters and 147 fire hydrants located within the MGCSD in 2014.

The MGCSD obtains its normal water supply from Shasta Lake through a contract with the Bureau of Reclamation. The MGCSD also has three groundwater wells; however, groundwater use is limited due to the high carbon dioxide content of the groundwater. In an emergency situation, the MGCSD can obtain water from Bella Vista Water District by installing a portable pump between two standpipes on Old Oregon Trail.

A hydraulic analysis completed in conjunction with the MGCSD's 2007 Master Water Plan indicates that small diameter waterlines limit maximum fire flows that can be achieved in some areas.

The southeastern portion of the water service area along Casa Drive and Kitty Hawk Lane is served through the undersized 4-inch Casa PRV Station. From this PRV, undersized water mains create a bottleneck for delivering adequate water pressures during high demand periods. Further, the existing six-inch main dead ends approximately 2,900 feet from the intersection of Kitty Hawk Lane and Sunrise Drive. Due to the potential for stagnation and deterioration of water quality, dead end lines must be flushed on a weekly basis. In addition, when repairs are needed in the area, the entire pressure zone must be shut down.

The South Water Tank is the only storage in the South Zone. Most of the storage in the distribution system is in the Water Treatment Zone and provides equalizing and fire flow storage for the Main and South Zones. Once the proposed Old Oregon Trail 12-inch main is installed, the Water Treatment Plant Zone will be connected to the Main and South Zones by a 12-inch main providing much of the flow rate during peak demand periods and fire flows. The dual-stage PRVs would allow the 12-inch main to feed the South Zone during these peak demand periods.

The purpose of the proposed project is to replace aging infrastructure, achieve adequate fire flows, provide adequate fire protection, reduce ongoing maintenance costs, reduce the potential for contamination due to leaks and dead-end waterlines, improve water quality in the South Water Tank, and ensure a safe and reliable potable water supply for customers in the MGCSD's water service area. A detailed description of the improvements is provided in Section 3.2 (Project Components/Physical Improvement).

Work is anticipated to commence in the spring of 2023 and would be completed in approximately 12 months. For purposes of this Initial Study, "study area" and "project site" shall mean the project footprint, which includes access roads, staging areas, and areas in which improvements are proposed.

3.2 PROJECT COMPONENTS / PHYSICAL IMPROVEMENTS

This section describes the proposed improvements that are the subject of this Initial Study. As shown in **Figure 2**, the project includes the following components:

Water Mains, Services, Meters, and Associated Improvements

In total, ±26,850 feet of water mains would be replaced, including:

- Replacement of ±15,000 feet of 6-inch water main with 12-inch water main and replacement of associated water services, water meters, meter boxes, and appurtenances, generally between the northern end of Old Oregon Trail North to the northeastern boundary of the Redding City limits.
- Replacement of existing 4-inch water main with 6- and 8-inch water mains in Copper Canyon Road, Grande Vista Lane, Lazy J Lane, Webula Drive, El Teda Lane, and Casa Drive and replacement of associated water services, water meters, meter boxes, and appurtenances.
- Installation of ±3,000 feet of 8-inch water main in the southernmost segment of Sunrise Drive (new pipeline segment).

Water mains would be installed using open-cut trenching. The project would require open-cut trenching through two creeks: West Fork Stillwater Creek at the northern extent of the project area and an unnamed tributary to East Fork Stillwater Creek on Sunrise Drive. In accordance with resource agency permits, the areas at the creek crossings would be restored to pre-construction contours.

At culvert crossings, the pipe would be installed in the fill overlying the culvert. If it is determined that the depth of fill is not sufficient to install the pipe over the culvert, the pipe would be installed by trenching under the culverts.

In paved areas, the existing pavement would be saw-cut and removed. Following installation of the pipe, the trench would be backfilled with a compacted granular material to prevent settlement, and the pavement would be replaced. In unpaved areas, the excavation would be backfilled with select native soils, and surface would be revegetated.

South Water Tank Improvements

The following improvements are proposed to provide a separate tank inlet and outlet to prevent short circuiting.

- The existing tank drain piping would be modified to provide a tank outlet.
- The existing altitude valve would be removed, and an 8-inch check valve would be installed in the existing inlet piping to ensure that water flows across the tank.
- New 8-inch outlet piping would be installed from the new check valve vault to the new tank outlet line.
- New modified overflow piping and a new overflow flap gate valve would be installed.

Fire Hydrants

Approximately 32 new or replacement fire hydrants would be installed throughout the water service area.

Pressure Reducing Supervisory Control Valves

- The 6-inch PRV at the Corporation Yard would be replaced with a 6-inch dual-stage PRV.
- The 6-inch PRV on Old Oregon Trail North, generally between Copper Canyon Road and Old Oregon Trail, would be replaced with a 10-inch dual stage PRV.
- The 8-inch PRV on Holiday Road, generally northwest of its intersection with Old Oregon Trail North, would be replaced with an 8-inch dual stage PRV.
- The 4-inch PRV on Casa Drive, generally northeast of its intersection with Sunrise Drive, would be replaced with an 8-inch dual stage PRV.

The PRVs would be housed within subsurface vaults. The PRV on Casa Drive would be hydraulically operated. The Corporation Yard, Holiday Road, and Old Oregon Trail PRVs would be replaced with solenoid-operated, dual-stage PRVs that would open and close based on the water level in the South Water Tank. When the valves are called to open, based on tank level, the solenoids would be energized, and the valves would open under command of the first-stage pressure reducing control.

The first-stage pressure reducing control would be set at a pressure higher than the South Water Tank to allow the distribution system to fill the tank. When the tank is full, the valves would be de-energized, and the valves would close. When the valves are called to close based on tank level, the second-stage pressure reducing control would command the valve. The second-stage pressure reducing control would be set at a lower pressure than the first stage and would open the valve on low pressure during peak demand periods or fire flow events.

The existing South Water Tank radio telemetry and existing District Supervisory Control and Data Acquisition (SCADA) system would be utilized to control the solenoid-operated PRVs.

Photovoltaic (PV) systems would be installed at the Holiday Road and Old Oregon Trail PRV sites to provide power for the radio telemetry and solenoids. This would require installation of a 4-square-foot (2 feet by 2 feet) solar panel on a 10-foot-high pole adjacent to the PRV vaults.

For the Corporation Yard PRV, electric service would be extended to the PRV from an existing service on the District's building. The line would be installed underground using open-cut trenching.

Bella Vista Water District Emergency Intertie

A new emergency intertie connection to the Bella Vista Water District water main would be installed at the southern extent of the proposed water main improvements on Old Oregon Trail.

Access to the work areas would be from paved public roads and private driveways. Temporary staging of construction equipment and materials would occur off of Old Oregon Trail North between Grande Vista Lane and Coyote Canyon Road, off of Holiday Road by the bridge over West Fork Stillwater Creek, and at the MGCSD Corporation Yard. Project staging would also occur in the affected road ROW throughout the project area.

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 aesthetic that apply to the proposed project.

STATE

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

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 views of Mount Shasta, as well as Stillwater Creek, trees and other vegetation, and open space. The project area is visible to individuals living and working in the area and to travelers on adjacent roadways.

South Water Tank Improvements

The South Water Tank is located at an elevation of ±1,010 feet above sea level. Due to trees and other vegetation on the water tank site, on adjacent properties, and along roadways in the project area, the tank is not visible from nearby public viewpoints. Improvements on the water tank site

include modifications to piping to provide a separate tank inlet and outlet, and installation of a check valve. Minimal vegetation would need to be removed to accommodate the tank improvements, and no permanent visual impacts would occur.

PRV Station Improvements

The PRVs would be installed in subsurface vaults. Electric lines at the Corporation Yard would be installed underground and no permanent visual impacts would occur.

Photovoltaic (PV) systems would be installed at the Holiday Road and Old Oregon Trail PRV sites to provide power for the radio telemetry and solenoids. This would require installation of a 4-square-foot (2 feet by 2 feet) solar panel on a 10-foot-high pole adjacent to the PRV vaults.

The Old Oregon Trail PRV site is located east of the intersection of Old Oregon Trail and Old Oregon Trail North. Other features in this area include overhead powerlines, residential structures, mailboxes, street signs, and directional signs. The pole and solar panel would be placed adjacent to the road ROW and would not be out-of-character with other features in the built environment in this location.

The Holiday Road PRV site is located west of the intersection of Holiday Road and Old Oregon Trail North. Other features in this area include chain link fencing, guard rails along I-5, overhead powerlines, street signs, and single-family residences. The pole and solar panel would be placed between Holiday Road and I-5 and would not be out-of-character with other features in this area.

Water Main Improvements

The majority of water mains would be installed in paved or graveled areas within the road ROW and private driveways and minimal vegetation would need to be removed to accommodate the proposed improvements. As stated in Section 3.2 (Project Components/Physical Improvements), paved areas that are disturbed during installation of the water mains would be re-paved following construction; no permanent visual impacts would occur.

The water main would cross West Fork Stillwater Creek at the northern end of the study area. Trenching through the creek would require the removal of vegetation along the banks of the creek. Approximately three trees would be removed to construct the water main on Sunrise Drive through an unnamed intermittent stream. In accordance with resource agency permits, the areas would be restored to pre-construction contours. Given the amount of trees and other vegetation that would remain, the project would not result in a significant permanent change in the visual character of the area.

Fire Hydrants

Approximately 32 fire hydrants would be installed throughout the water service area. The hydrants would be placed near the road ROW and would not detract from the visual character of the area.

The proposed project would have short-term visual impacts during construction due to clearing, trenching, and staging of construction equipment and materials. However, this is a temporary impact and would cease when the project is complete.

Therefore, impacts would be less than significant because the project does not include any components that could impede the view of a scenic vista; natural areas disturbed during construction would be restored to pre-construction conditions; affected roads would be repaved; and impacts during construction would be temporary and cease at completion of the project.

Question B

The nearest officially designated State Scenic Highway is Route 151 (Shasta Dam Boulevard), located approximately four miles west of the project area. The scenic route commences at the intersection of SR 151 and Lake Boulevard and continues to Shasta Dam. The proposed project would not be visible from the scenic route. Therefore, the proposed project would have no impact to scenic resources within a designated State Scenic Highway.

Question D

The project does not include the installation of any new permanent exterior lighting. Temporary lighting needed during construction activities would be required to comply with Shasta County Code (SCC) §17.84.050, that states all lighting shall be designed and located so as to confine direct lighting to the premises. A light source shall not shine upon or illuminate directly on any surface other than the area required to be lighted. No lighting shall be of the type or in a location such that it constitutes a hazard to vehicular traffic, either on private property or on abutting streets.

As described in Section 3.2 (Project Components/Physical Improvements), the project includes installation of two ten-foot-high poles with solar panels measuring 2 feet by 2 feet. Solar panels are designed to absorb light rather than reflect it, which minimizes glare. In addition, due to the small size of the panels, impacts associated with glare are not expected. Therefore, 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

Potential cumulative projects in the area include growth according to the build-out projections in the County's 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. In addition, the proposed project would include only temporary construction lighting that would cease at the completion of construction. Therefore, the project's aesthetic impacts would not be cumulatively considerable.

MITIGATION

None necessary.

DOCUMENTATION

Shasta County. 2020. Shasta County Code, Chapter 17.84 General Development Standards). https://library.municode.com/ca/shasta_county/codes/code_of_ordinances?nodeId=CD_ORD_T117ZO_CH17.84GEDEST_17.84.050LI. Accessed December 2020.

Caltrans. 2021. California State Scenic Highway Mapping System. Shasta County. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>. Accessed January 2021.

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:

Chapter 6.1, Agricultural Lands		
Objective:	AG-5	Protection of agricultural lands from development pressures and or uses which will adversely impact or hinder existing or future agricultural operations.
Policy:	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 published by the FMMP, areas in which improvements would occur are not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

According to the County’s Zoning Map, the majority of parcels in the study area are zoned Rural Residential (R-R). The R-R zone allows agricultural uses outright, provided that the parcel size is at least one gross acre. None of the parcels in the study area are subject to a Williamson Act contract. The proposed improvements are located within road ROW and public utility easements, and none of the improvements would impede agricultural uses on private properties in the area. Because the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance and would not conflict with agricultural zoning or 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 (TPZ) zones or Timberland (TLZ) zones in the project area. The closest TLZ is about 6.8 miles northwest of the project site. The project does not involve any work in or adjacent to timberlands; therefore, the project would have no impact on timberland.

As stated under Regulatory Context above, “forest land” is defined in PRC §12220(g) is 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 no conversion of forest land to non-forest use would occur. Therefore, there would be no impact.

CUMULATIVE IMPACTS

The County's General Plan acknowledges that agricultural land uses are a major component of the County's resource land base and are also a major element in defining the quality of life available to the residents of Shasta County. Were agriculture to lose its land-based prominence in the County, the rural character and country living valued by its residents and important to its economy would likely decline. 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

None necessary.

DOCUMENTATION

Shasta County. 2021. Shasta County Zoning Map. <https://maps.co.shasta.ca.us/ShastaCountyMap/>. Accessed January 2021.

State of California, Department of Conservation. 2020. Important Farmland Finder. <https://maps.conservation.ca.gov/dlrp/ciff/>. Accessed September 2020.

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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 (CAP), known as the National Ambient Air Quality Standards (NAAQSs). The NAAQSs 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
Ozone (O₃)	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 _x). 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"> • Respiratory symptoms. • Worsening of lung disease leading to premature death. • Damage to lung tissue. • Crop, forest, and ecosystem damage. • Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals. 	Motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.
Carbon Monoxide (CO)	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"> • Chest pain in patients with heart disease. • Headache. • Light-headedness. • Reduced mental alertness. 	Motor vehicle exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide (NO₂)	<p>Nitrogen dioxide is a reddish-brown gas formed when nitrogen (N₂) combines with oxygen (O₂). 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, NO₂ is the most abundant in the atmosphere and is related to traffic density.</p>	<ul style="list-style-type: none"> • Respiratory symptoms. • Damage to lung tissue. • Worsening of cardiovascular disease. • Precursor to ozone and acid rain. • Contributes to global warming and nutrient overloading which deteriorates water quality. • Causes brown discoloration of the atmosphere. 	Automobile and diesel truck exhaust, petroleum-refining operations, industrial sources, aircraft, ships, railroads, and fossil-fueled power plants.
Sulfur Dioxide (SO₂)	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"> • Respiratory symptoms. • Worsening of cardiovascular disease. • Damage to a variety of materials, including marble, iron, and steel. • Damages crops and natural vegetation. • Impairs visibility. • Precursor to acid rain. 	Petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and large ships, and fuel combustion in diesel engines.
Particulate Matter (PM_{2.5} and PM₁₀)	Particulate matter is a major air pollutant consisting of tiny solid or liquid particles	<ul style="list-style-type: none"> • Premature death. • Hospitalization for 	Dust- and fume-producing construction activities, power plants, steel mills, chemical

	<p>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 (PM₁₀) is inhalable into the lungs and can induce adverse health effects.</p> <p>Fine particulate matter is defined as particles that are 2.5 microns or less in diameter (PM_{2.5}). Therefore, PM_{2.5} comprises a portion of PM₁₀.</p>	<p>worsening of cardiovascular disease.</p> <ul style="list-style-type: none"> • Hospitalization for respiratory disease • Asthma-related emergency room visits. • Increased symptoms, increased inhaler usage 	<p>plants, unpaved roads and parking lots, woodburning stoves and fireplaces, wildfires, motor vehicles, and other combustion sources. Also a result of photochemical processes.</p>
Lead	<p>A heavy metal that occurs both naturally in the environment and in manufactured products.</p>	<ul style="list-style-type: none"> • Impaired mental functioning in children • Learning disabilities in children • Brain and kidney damage. • Reproductive disorders. • Osteoporosis. 	<p>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.</p>

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). 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 (SO₄). Sulfate is oxidized to sulfur dioxide (SO₂) 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 (H₂S). 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 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 ₃)	8 Hour	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³)
	1 Hour	0.09 ppm (180 µg/m ³)	–
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)
	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)
Sulfur Dioxide (SO ₂)	24 Hour	0.04 ppm (105 µg/m ³)	0.14
	3 Hour	–	–
	1 Hour	0.25 ppm (665 µg/m ³)	75 ppb (196 µg/m ³)
	Annual Arithmetic Mean	–	0.030 ppm
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	–
	24 Hour	50 µg/m ³	150 µg/m ³
Particulate Matter – Fine (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³
	24 Hour	–	35 µg/m ³
Sulfates	24 Hour	25 µg/m ³	–
Lead	Calendar Quarter	–	1.5 µg/m ³
	30 Day Average	1.5 µg/m ³	–
	Rolling 3-Month Average	None	0.15 µg/m ³
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	–
Vinyl Chloride (chloroethene)	24 Hour	0.01 ppm (26 µg/m ³)	–
Visibility-Reducing Particles	8 Hour	–	–

Source: CARB 2016. Notes: mg/m³=milligrams per cubic meter; ppm=parts per million; ppb=parts per billion; µg/m³=micrograms per cubic meter

Toxic Air Contaminants

In addition to the California CAPs, Toxic Air Contaminants (TACs) are another group of pollutants regulated under the California CAA. TACs are less pervasive in the urban atmosphere than the CAPs, but are linked to short-term (acute) and long-term (chronic or carcinogenic) adverse human health effects, including cancer, birth defects, neurological damage, and death. 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. Under Assembly Bill 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987, facilities found to release high volumes of toxic air pollution are required to conduct a detailed health risk assessment that estimates emission impacts to the neighboring community and recommends mitigation to minimize TACs.

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 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.

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) 2018 Triennial AQAP constitutes the region’s State Implementation Plan (SIP). The NSVPA 2018 AQAP, adopted by the SCAQMD Board on May 7, 2019, includes updated control measures for the three-year period of 2019 through 2021. Shasta County has determined that the County’s primary emphasis in implementing the 2018 Attainment Plan 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 (NOx) and Particulate Matter, 10 microns in size (PM₁₀) 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**

Level	ROG	NOx	PM ₁₀
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 achieve the highest feasible reduction in 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.

DISCUSSION OF IMPACTS

Questions A and B

As discussed under Regulatory Context, 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. The NSVAB 2018 AQAP serves as the air quality plan for the region.

The project would result in the temporary generation of ROG, NO_x, PM₁₀, and other regulated pollutants during construction. ROG and NO_x emissions are associated with employee vehicle trips, delivery of materials, and construction equipment exhaust. PM₁₀ is generated during site preparation, excavation, road paving, and from exhaust associated with construction equipment.

Project emissions were estimated using Version 2016.3.1 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 (O₃) emissions. Instead, emissions of ozone precursors are calculated. Ozone precursors are quantified as ROG and NO_x 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**.

Site-specific inputs and assumptions 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 spring of 2023 and occur over a period of approximately 12 months.
- Total land disturbance would be approximately 15 acres; 7,660 cubic yards (CY) of dirt would be imported; 8,260 CY would be exported.
- The total area to be re-paved following pipeline installation would be 11 acres.
- The total weight of demolition debris (pavement) to be removed from the project site would be approximately 8,010 tons.
- The project would implement SCAQMD rules, regulations, and standard mitigation measures.

In addition, the proposed project is subject to the In-Use Off-Road Diesel Vehicle Regulation adopted by CARB. The off-road regulation imposes limits on idling, requires all vehicles be reported to CARB and subsequently labeled, restricts adding older vehicles into fleets, and requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). Large and medium fleets have annual compliance deadlines through 2023. Small fleets have compliance deadlines each year from 2019-2028.

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

**TABLE 4.3-4
Projected Construction Emissions**

Year	Pollutants of Concern											
	ROG		NO _x		PM ₁₀		PM _{2.5}		CO		SO ₂	
	Maximum lbs/day	Tons/year	Maximum lbs/day	Tons/year	Maximum lbs/day	Tons/year	Maximum lbs/day	Tons/year	Maximum lbs/day	Tons/year	Maximum lbs/day	Tons/year
2023	2.04	0.18	23.05	1.82	5.12	0.21	1.56	0.13	16.53	1.47	0.05	Trace
2024	1.99	0.03	9.54	0.13	0.51	Trace	0.44	Trace	14.89	0.20	0.02	Trace

As shown in **Table 4.3-4**, construction of the proposed project would not exceed the SCAQMD Level A or Level B thresholds shown in **Table 4.3-3**. In addition, the Federal General Conformity Rule does

not apply to the proposed project because Shasta County is designated as attainment or unclassified for all federal ambient air quality standards.

In addition, the proposed project would not result in significant impacts associated with ozone (O₃), lead (Pb), hydrogen sulfide (H₂S), 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_x) are calculated. Because project construction would generate relatively low amounts of both ROG and NO_x, the potential for ozone production/emissions is 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 formed during the decomposition of organic material in anaerobic environments, including sewage treatment processes. The proposed project would not result in an increase in wastewater generation; therefore, there is no potential for an increase in hydrogen sulfide emissions.

Vinyl Chloride. Vinyl chloride is used to manufacture polyvinyl chloride (PVC) plastic and other vinyl products. Approximately 98 percent of vinyl chloride produced in the United States is used during the manufacture of PVC. Additionally, vinyl chloride is produced during the microbial breakdown of chlorinated solvents (e.g., engine cleaner, degreasing agent, adhesive solvents, paint removers, etc.). The potential for vinyl chloride exposure is primarily limited to areas in close proximity to PVC production facilities. Because PVC manufacturing facilities are absent from the project area, and project implementation would not result in an increase of chlorinated solvents, there is no potential for 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 Management Plan, natural wildfires and biogenic emissions are the primary contributors to visibility-reducing pollutants. For the proposed project, visibility-reducing pollutants (e.g., PM_{2.5} and PM₁₀), would be generated only during construction activities. Because only relatively low amounts of particulates would be generated, potential impacts with respect to visibility-reducing pollutants are less than significant.

The project does not include any components that would increase operational emissions over existing conditions. Solar panels would be installed to operate two of the PRV stations, and there would be a slight decrease in indirect emissions associated with energy use. Because the proposed project would not exceed the SCAQMD thresholds during construction, does not have any components that would increase long-term operational emissions, and would not result in significant impacts associated with O₃, Pb, H₂S, vinyl chloride, or visibility-reducing particles, impacts would be less than significant, and the proposed project would be in conformance with the NSVPA 2018 Triennial AQAP.

Question C

See discussion under 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 stated above, the proposed project does not have any components that would result in long-term operational emissions. The proposed project includes construction activities adjacent to single-family residences on Old Oregon Trail North, Old Oregon Trail, Copper Canyon Road, Grande Vista Lane, Lazy J Lane, Welbula Drive, El Teda Lane, Casa Drive, Sunrise Drive, Kitty Hawk Lane, and parcels adjacent to the Water Tank site on Lee View

Lane, Peppernut Drive, and Holiday Road. There is also a private school, on Kitty Hawk Lane about 350 feet northeast of the intersection of Sunrise Drive and Kitty Hawk Lane.

As discussed above, the proposed project would generate PM₁₀ and other pollutants during construction. Although these emissions would cease with completion of construction work, sensitive uses 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 **Mitigation Measure MM 4.3.1** would reduce impacts to a less-than-significant level.

Question D

The project does not include any components that would result in the generation of long-term odors or similar emissions adversely affecting a substantial number of people. Construction activities that have the potential to emit odors and similar emissions include operation of 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.

CUMULATIVE IMPACTS

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. In developing attainment designations for criteria pollutants, the USEPA considers the region's past, present, and future emission levels. In addition, local air districts determine suitable significance thresholds based on an area's designated nonattainment status, which also considers the region's past, present, and future emissions levels.

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, SMMs apply to all discretionary projects in Shasta County in order to reduce cumulative impacts (refer to **Mitigation Measure MM 4.3.1**). In addition, as discussed above, emissions resulting from the proposed project would not exceed Shasta County thresholds, and construction would be in conformance with CARB and the applicable SIP developed to address cumulative emissions of criteria air pollutants in the NSVAB. Therefore, the proposed project would have a less-than-significant cumulative impact on local and regional air quality with implementation of **Mitigation Measure MM 4.3.1**.

MITIGATION

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. This provision is enforced by local law enforcement agencies.

- g. Paved streets in and adjacent to the construction site shall be swept or washed at the end of the day 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.

DOCUMENTATION

California Air Resources Control Board. 2019. Area Designations Maps—State and National. <http://www.arb.ca.gov/desig/adm/adm.htm>. Accessed February 2021.

_____. 2021. Ambient Air Quality Standards. <https://ww2.arb.ca.gov/resources/background-air-quality-standards>. Accessed February 2021.

_____. 2021. Air Toxics Program Website. <https://ww2.arb.ca.gov/our-work/programs/air-toxics-program/resources>. Accessed February 2021.

_____. 2009. California Regional Haze Plan. https://www.arb.ca.gov/planning/reghaze/final/rhplan_final.pdf. Accessed February 2021.

_____. 2016. In-Use Off-Road Diesel-Fueled Fleets Regulation Overview. https://ww3.arb.ca.gov/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf. Accessed February 2021.

Sacramento Valley Air Quality Engineering and Enforcement Professionals (SVAQEPP). 2018. Northern Sacramento Valley Planning Area 2018 Triennial Air Quality Attainment Plan. https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/air-quality-docs/2018_triennial_air_quality_attainment_plan.pdf, July 26, 2018. Accessed February 2021.

Shasta County Air Quality Management District. 2004. Shasta County General Plan, Chapter 6.5 (Air Quality). http://www.co.shasta.ca.us/index/drm_index/planning_index/plng_general_plan.aspx. Accessed February 2021.

U.S. Department of Health and Human Services. 2006. Toxicological Profile for Vinyl Chloride. <http://www.atsdr.cdc.gov/toxprofiles/tp20.pdf>. Accessed October 2020.

U.S. Environmental Protection Agency. 2021. Criteria Air Pollutants. <https://www.epa.gov/criteria-air-pollutants>. Accessed February 2021.

_____. 2020. Nitrogen Oxide Emissions. <http://www3.epa.gov/climatechange/ghgemissions/gases/n2o.html>. Accessed October 2020.

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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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

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 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 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

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 provides technical support to the Commission, and may submit listing petitions and assist with the evaluation process. 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 Act

The State of California provides for oak protection through the Oak Woodlands Conservation Act (Act), last amended in 2005. The Act applies only when the lead agency is a county and the project is located in an unincorporated county area. The Act requires a determination of whether the project may result in the conversion of oak woodlands that will have a significant effect on the environment as well as implementation of oak woodland mitigation measures, if necessary.

LOCAL

Shasta County

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

Chapter 6.7, Fish and Wildlife

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

DISCUSSION OF IMPACTS

Questions A and B

The evaluation of potential impacts on candidate, sensitive, and/or special-status 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**). **Appendix B** includes the following:

- California Natural Diversity Database (CNDDDB) Query Summary

- California Native Plant Society (CNPS) Query Summary
- U.S. Fish and Wildlife Service List of Threatened and Endangered Species and Critical Habitats
- National Marine Fisheries Service List of Threatened and Endangered Species, Critical Habitats, and Essential Fish Habitat
- ENPLAN's evaluation of the potential for special-status species to occur on the project site
- A list of vascular plants observed during the botanical survey.

The records searches included a review of California Natural Diversity Data Base (CNDDDB) records for special-status plants and wildlife; California Native Plant Society records for special-status plant species; federal records for listed, proposed, and candidate plant and wildlife species under jurisdiction of the USFWS and NMFS; critical habitat data maintained by the USFWS and NMFS; and essential fish habitat (EFH) data maintained by the NMFS.

To determine the presence/absence of special-status plant and animal species in the study area, ENPLAN biologists conducted botanical and wildlife surveys on March 26, March 27, April 6, April 15, June 3, and July 20, 2020. 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.

Special-Status Plant Species

The potential for each special-status plant species to occur in the project site is evaluated in **Appendix B**. As documented in Appendix B, no special-status plant species were observed during the botanical survey, nor are any expected to be present. Therefore, the proposed project would have no impact on special-status plant species.

Special-Status Animal Species

The potential for each special-status animal species to occur in the project site is evaluated in **Appendix B**. As documented in Appendix B, the study area has the potential to support the following special-status animal species:

California Central Valley (CCV) Steelhead (*Oncorhynchus mykiss*), Federally Threatened
As documented in Appendix B, it is possible that CCV steelhead may be present in West Fork Stillwater Creek and in an unnamed tributary to East Fork Stillwater Creek. Steelhead, if present, could be directly impacted during trenching through these intermittent streams. As documented in Appendix B, by June 1, downstream portions of Stillwater Creek are dry and there is no connectivity to the Sacramento River, and/or water temperatures are above 25°C and are lethal to steelhead.

MM 4.4.1 limits construction activities within the ordinary high-water mark of the streams to the period between June 1 and October 31 when the streams are dry or water temperatures are above 25°C. This measure ensures that no direct impacts to steelhead would occur.

Chinook Salmon (*Oncorhynchus tshawytscha*), State Species of Special Concern
As documented in the BSR, it is possible that fall/late fall-run Chinook salmon may be present in the intermittent streams within the project area during construction and could be directly impacted during trenching through these intermittent streams. As stated above, **MM 4.4.1** limits construction within the ordinary high-water mark to the dry season when fish would not be present, and implementation of BMPs in accordance with SWRCB requirements would minimize/avoid the potential for indirect impacts on Chinook salmon.

Critical Habitat/Essential Fish Habitat

NMFS records show that mainstem Stillwater Creek and East Fork Stillwater Creek are federally designated as critical habitat for CCV steelhead downstream of the ESL (NMFS, 2020a). The designated critical habitat is about 7.5 miles downstream of the Old Oregon Trail North crossing and about 3.0 miles downstream of the Sunrise Drive crossing. Additionally, the lowermost 1.3 miles of mainstem Stillwater Creek are designated as critical habitat for Central Valley spring-run chinook salmon; this stream reach provides “consistent, fair” non-natal rearing habitat only, with no spawning, holding, or migration utility (NMFS, 2020a). The designated critical habitat for spring-run is about 16.5 miles downstream of the ESL.

NMFS (2020b) identifies Essential Fish Habitat (EFH) in the USGS Project City quadrangle for Chinook salmon. Salmon EFH consists of “those waters and substrate necessary for salmon production needed to support a long-term sustainable salmon fishery and salmon contributions to a healthy ecosystem.” Salmon EFH includes all those streams, lakes, ponds, wetlands, and other water bodies currently or historically accessible to salmon in Washington, Oregon, Idaho, and California. Salmon EFH excludes areas upstream of longstanding naturally impassible barriers (i.e., natural waterfalls in existence for several hundred years), but includes aquatic areas above all artificial barriers except specifically named impassible dams.

In the project area, West Fork Stillwater Creek and the unnamed tributary to East Fork Stillwater Creek provide EFH for fall- and late fall-run Chinook salmon. As stated in Section 3.2, project implementation would involve trenching through a segment of West Fork Stillwater Creek at the northern extent of the project area and through the unnamed tributary to East Fork Stillwater Creek on Sunrise Drive.

Work would require the removal of ±0.01 acre of riparian habitat along the banks of West Fork Stillwater Creek. **MM 4.4.2** is included to avoid/minimize potential adverse effects on riparian habitat. **MM 4.4.3** would offset impacts on EFH resulting from riparian habitat removal along West Fork Stillwater Creek.

In addition, habitat degradation could occur if sediment-laden water enters surface waters in and downstream of the project area. As discussed in Section 1.8 (Regulatory Requirements), the MGCSD is required to develop a SWPPP that includes BMPs to control erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat.

The introduction and spread of noxious weeds during construction activities also 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 unwashed 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. Implementation of **MM 4.4.4** reduces potential impacts related to the introduction and spread of noxious weeds to a less-than-significant level.

Therefore, implementation of **MM 4.4.1** through **MM 4.4.4**, combined with BMPs for sediment control and spill prevention, ensures that direct and indirect impacts to special-status species and their habitats are less than significant.

Question C

ENPLAN conducted field investigations on April 19, April 26, and August 2, 2020, to identify wetlands and other waters of the U.S. and State. The field investigation was 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* (limited to determining State jurisdiction).

As a result of the field delineation effort, 70 features (± 0.509 acres) were mapped in the study area (one seasonal wetland, 13 intermittent streams, six ephemeral streams, and 50 constructed ditches). Approximately 0.009 acres are categorized as seasonal wetland, ± 0.115 acres are categorized as intermittent streams, and ± 0.007 acres are categorized as ephemeral streams. Approximately 0.378 acres are constructed ditches. Four of the constructed ditches intercept or receive water from a USACE jurisdictional feature such as an intermittent stream or wetland. Maps depicting wetlands and other waters of the U.S. and State in the Study area are included in **Appendix C**.

As documented in the Aquatic Delineation Report, the ephemeral streams do not appear to be subject to USACE jurisdiction. The four constructed ditches that intercept or receive water from nearby jurisdictional features are potentially subject to state and federal jurisdiction. The extent of federal jurisdiction will be determined by USACE staff in accordance with the Navigable Waters Protection Act. The extent of State jurisdiction will be determined by Water Board staff, in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State.

The project would temporarily impact up to ± 0.035 acre of intermittent stream at the northern extent of the project area (West Fork Stillwater Creek) and up to ± 0.064 acre of an unnamed intermittent stream on Sunrise Drive. In addition, although the seasonal wetland north of Welbula Lane is outside of the graveled roadway, direct impacts could occur if construction activities, including vehicle parking and/or stockpiling of materials, encroached into this area. **Mitigation Measure 4.4.5** is included to require that prior to commencement of construction activities on Welbula Lane, exclusionary fencing, flagging, or other markers shall be installed around the wetland.

The project is subject to conditions of a CWA Section 404 permit as required by the USACE. It is anticipated that the proposed project qualifies for a USACE Nationwide Permit. 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. A Streambed Alteration Agreement from CDFW would also be required.

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 the original hydrology of the site. In addition, temporarily disturbed areas must be revegetated to minimize erosion, as appropriate. Because MGCSD would comply with conditions of resource-agency permits, impacts would be less than significant.

Compliance with the conditions of resource agency permits, use of BMPs for spill prevention and erosion control, and implementation of **MM 4.4.5** would reduce the project's potential impacts on wetlands and other waters of the U.S. and State to a less-than-significant level.

Question D

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. Further, the project does not include installation of fencing or other permanent structures that could impede the movement of wildlife. 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 for wildlife.

As discussed under Questions A and B, there is a potential for CCV steelhead and fall/late fall-run Chinook salmon to be present in the study area. Trenching through West Fork Stillwater Creek and the unnamed tributary on Sunrise Drive has the potential to affect these species and their habitat. However, **MM 4.4.1** is included to limit work in these streams to the dry season when fish would not be present, and **MM 4.4.2** and **MM 4.4.3** are included to minimize impacts to riparian habitat and offset the removal of riparian habitat in West Fork Stillwater Creek.

Daytime movement of terrestrial wildlife species along stream corridors throughout 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 alter their routes to move around the construction areas or use the stream corridors during non-working hours. There is a slight possibility that wildlife could be trapped in open trenches and pipes during construction. **MM 4.4.6** is included to prevent the inadvertent entrapment of wildlife.

The project area 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 tree removal and/or construction equipment operating in an area with an active nest with eggs or chicks. Indirect effects could include nest abandonment by adults in response to loud noise levels or human encroachment, or a reduction in the amount of food available to young birds due to changes in feeding behavior by adults.

Construction activities that occur in surfaced roadways and graveled road shoulders would not directly affect nesting birds because no nesting habitat would be affected; indirect effects to nearby nesting habitats, such as nest abandonment by adults in response to loud noise levels, are likewise not expected because birds that may nest adjacent to roadways would be accustomed to periodic loud noises and other human-induced disturbances.

Construction activities, particularly those involving vegetation removal at West Fork Stillwater Creek and adjacent to the creek crossing on Sunrise Drive, have the potential to directly impact nesting birds, if present. In the local area, most birds nest between February 1 and August 31. As required by **Mitigation Measure MM 4.4.7**, the potential for adversely affecting nesting birds can be greatly minimized by removing vegetation and conducting construction activities either before February 1 or after August 31. If this is not possible, a nesting survey would be conducted within one week prior to removal of vegetation and/or the start of construction.

If active nests are found in the project site, MGCSD would 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 based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

Therefore, because **MM 4.4.1**, **MM 4.4.2**, and **MM 4.4.3** are included to avoid/minimize impacts to fish and their habitat, activities that may impede the movement of wildlife would be temporary and would cease at completion of the project, **MM 4.4.6** would prevent the inadvertent entrapment of wildlife, and **MM 4.4.7** would reduce the potential for adversely affecting nesting birds, impacts would be 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 4.4.7** and compliance with resource agency permits 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. Therefore, there would be no impact.

CUMULATIVE IMPACTS

Cumulative projects in the site vicinity, including growth resulting from build-out of the County's 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 4.4.7**, implementation of BMPs for erosion and sediment control, and compliance with resource agency permits ensures that the project's contribution to cumulative regional impacts is less than significant.

MITIGATION

- MM 4.4.1** Construction activities within the ordinary high-water mark of streams shall be limited to the period between June 1 and October 31, or as may otherwise be specified through jurisdictional permits/certifications issued by the California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and/or Regional Water Quality Control Board. If work is proposed outside of the agency-approved work windows, the Mountain Gate Community Services District shall obtain approval from those agencies prior to conducting such work, and shall implement any additional measures that may be required.
- MM 4.4.2** Loss of riparian habitat along drainages shall be minimized to the extent feasible. Measures to be taken to minimize such loss include the following:
- Minimize the construction disturbance to riparian habitat along drainage systems through careful pre-construction planning.
 - Install high-visibility fencing, flagging, or other markers along the outer edges of the construction zone where needed to prevent accidental entry into riparian habitat.
 - Stockpile equipment and materials outside of riparian habitat, in the designated staging areas.
 - Prune any riparian plants at ground level where feasible (as opposed to mechanically removing the entire plant and root system) in temporary use areas, which will promote regeneration from the root systems.
- MM 4.4.3** The unavoidable removal of riparian vegetation shall be offset by revegetating the banks of West Fork Stillwater Creek with woody riparian species native to the immediate area (e.g., willow species). Stem cuttings or rooted plants shall be outplanted into the pre-project riparian zone during the fall/winter season immediately following installation of the water main

through West Fork Stillwater Creek, after the soil has been thoroughly moistened by fall rains. Additional riparian planting specifications are provided in the Biological Study Report.

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 edges of the construction zone adjacent to the seasonal wetland on Welbula Lane. The fencing location shall be determined by a qualified biologist in consultation with the project engineer and MGCSD. 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 on Welbula Lane to ensure 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.

MM 4.4.7 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, 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 to the California Department of Fish and Wildlife 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.

DOCUMENTATION

California Department of Fish and Wildlife. 2019. California Regional Conservation Plans. <https://wildlife.ca.gov/Conservation/Planning/NCCP>. Accessed February 2021.

Shasta County. 2004. Shasta County General Plan. <https://www.co.shasta.ca.us/index/drm/planning/general-plan>. Accessed February 2021.

National Marine Fisheries Service. 2020. Critical Habitat GIS Data. http://www.westcoast.fisheries.noaa.gov/maps_data/endorsed_species_act_critical_habitat.html.

_____. 2020b. Essential Fish Habitat Mapper. <http://www.habitat.noaa.gov/protection/efh/efhmapper/index.html>.

U.S. Fish and Wildlife Service. Region 8 Habitat Conservation Plans. <https://ecos.fws.gov/ecp0/conservationPlan/region/summary?region=8&type=HCP>. Accessed February 2021.

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. In addition to meeting at least one of the criteria outlined above, 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.
Policy:	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.

DISCUSSION OF IMPACTS

Questions A and B

A Cultural Resources Inventory (CRI) was completed for the proposed project by ENPLAN in September 2020. The study included a records search, Native American consultation, and field evaluation. 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); National Register of Historic Places (NRHP); California Register of Historical Resources (CRHR); California Inventory of Historic Resources; California Historical Landmarks; California Points of Historical Interest; Native American Heritage Commission (NAHC); Shasta Historical Society; Shasta Lake Heritage and Historical Society; and historical maps and aerial photographs.

Archaeological fieldwork took place on June 7, July 22, and September 16, 2020. The entire Area of Potential Effects (APE) was surveyed to identify cultural or historical resources that would be potentially affected by the proposed project.

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 vertical APE is 4.5 feet over the majority of the project with the depth increasing up to 7.5 feet when passing under existing culverts.

Records Search

Research at the NEIC was conducted on May 2, 2020, and covered an approximate half-mile radius around the APE for previously recorded archaeological 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 revealed that the project area has been extensively surveyed in the past in conjunction with previous development projects (i.e. Haines CFIP Project, Proposed Old Oregon Trail Subdivision, Proposed McClanahan Parcel Split, Erikson/Hayes Proposed Subdivision and Residential Development, Union School Road Rehabilitation Project, and others). At least 42 cultural resource surveys have been conducted within a half-mile radius of the project APE, eight of which encompassed portions of the APE.

There are 15 previously recorded sites in the search radius; however, none of the sites is within the project's APE. Review of the NRHP, the CRHR, California Historical Landmarks, and California Points of Historical Interest did not identify any additional resources within the APE. Consultation with the Shasta Historical Society and Shasta Lake Heritage and Historical Society did not identify any resources in the project area.

Native American Consultation

In response to ENPLAN's request for information, on May 12, 2020, the NAHC conducted a search of its Sacred Lands File. The search did not reveal any known Native American sacred sites or cultural resources in the project area. The NAHC also provided contact information for several Native American representatives and organizations. On May 14, 2020, ENPLAN contacted the Native American representatives identified by the NAHC with a request to provide comments on the proposed project. Follow-up e-mails and telephone calls were placed on June 1, 2020, to these representatives.

Kelli Hayward and Brenda Hogan with the Wintu Tribe of Northern California responded and requested additional information on the proposed project, including additional maps showing where improvements would occur. The draft cultural resources inventory report was submitted to the commenters on March 11, 2021. Kelli Hayward responded with a request that either a Native American monitor be present during construction or that appropriate construction personnel obtain cultural resources training prior to initiating work. A mitigation measure (**MM 4.5.1**) was subsequently added to the report and to this Initial Study requiring cultural resources training for construction personnel.

No other comments or concerns were reported by any Native American representative or organization.

Conclusions

During the field evaluation, one cultural resource was noted in the APE. A 338-foot section of dry-laid rock retaining wall, Copper Canyon Wall, was located along the west side of the north end of Copper Canyon Road. It was determined that the wall is likely over 50 years old, and possibly more than 100 years old, making it a recordable historical feature. However, Copper Canyon Wall does not meet any of the National or California Historic registry criteria. In addition, its integrity is poor due to deterioration from weathering and substantial damage from residential development and maintenance, widening, and other improvements to Copper Canyon Road. Given this, Copper Canyon Wall does not qualify for listing on the NRHP or the CRHR.

Based on the geomorphological and topographic characteristics of the project site, the results of the records and literature search, and the age of soils mapped in the area, the majority of the project area is considered to have a low potential for historic and prehistoric resources. Excavation at the northern end of Old Oregon Trail in the Stillwater Creek floodplain and along the Copper Canyon Road corridor has a moderate potential to encounter buried historic and prehistoric resources.

Mitigation Measure MM 4.5.2 addresses the inadvertent discovery of cultural resources and ensures that impacts are less than significant.

Question C

The project area does not include any known cemeteries, burial sites, or human remains. However, it is possible human remains may be unearthed during construction activities. **Mitigation Measure 4.5.3** 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. Therefore, impacts are less than significant.

CUMULATIVE IMPACTS

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 discussed above, **Mitigation Measures MM 4.5.2 and MM 4.5.3** address the inadvertent discovery of cultural resources and/or human remains during construction. Because all development projects in the State are subject to the same measures pursuant to PRC §21083.2 and CEQA Guidelines §15064.5., the proposed project's cumulative impact to cultural resources is less than significant.

MITIGATION

MM 4.5.1 Prior to commencement of any earth disturbance (e.g., clearing, grading, trenching, etc.), all construction personnel participating in the earth-disturbing activities and their supervisors shall receive training regarding cultural and tribal cultural resources that may be present on the project site. Training shall be provided by the Wintu Tribe of Northern California or, if tribal representatives are not available, by a qualified archaeologist. At a minimum, the training shall include a discussion of pertinent laws protecting cultural and tribal cultural resources, examples of resources that could be encountered during project construction, and procedures to be followed if resources are found. The latter shall include familiarity with conditions requiring pause of work, notifications to be made if cultural materials or human remains are encountered, and dignity/respect training.

If new personnel are added to the project, the District shall ensure that they receive the mandatory training before starting work. The initial training session may be videotaped and presented to new personnel to satisfy the sensitivity training requirement. If individuals can provide documentation of cultural resources training within the past two years, recertification is not warranted.

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 Mountain Gate 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 Mountain Gate CSD prior to resuming construction.

MM 4.5.3 In the event that human remains are encountered during construction activities, the Mountain Gate 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

Shasta County. 2004. Shasta County General Plan, Chapter 6.1 Heritage Resources. https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/docs/6_10heritage.pdf?sfvrsn=5407829_0. Accessed March 2020.

ENPLAN. 2021. Cultural Resources Inventory Report: Mountain Gate Community Services District Water System Improvements Project, Shasta County, California. Confidential document on file at NEIC/CHRIS.

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. The energy use analysis may be included in related analyses of air quality, GHG emissions, transportation, or utilities at the discretion of the lead agency.

DISCUSSION OF IMPACTS

Questions A and B

The project includes replacement of water mains that have a history of significant leaks and failures, which will reduce the amount of energy required for raw surface water pumping, groundwater pumping, and water treatment. Further, eliminating dead-end water lines will eliminate the need for CSD staff to flush the lines on a weekly basis, resulting in a reduction in energy use associated with maintenance vehicles. In addition, two of the PRV stations would be operated with solar power, thus minimizing the use of electricity.

Energy consumption during construction would occur from diesel and gasoline used for construction equipment, haul trucks, and construction workers travelling to and from the work site. Construction equipment would comply with regulations that restrict idling when not in use (see **Mitigation Measure MM 4.3.1(h)**). Construction equipment must also comply with State regulations that require the use of fuel-efficient equipment. With implementation of **MM 4.3.1(h)**, and compliance with existing State regulations that require the use of fuel-efficient equipment, impacts would be less than significant.

CUMULATIVE IMPACTS

Completion of the proposed project and other potential cumulative projects in the region, including growth resulting from build-out of the County's 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 regulations that require the use of fuel-efficient equipment during construction. With implementation of **Mitigation Measure MM 4.3.1(h)** and compliance with State regulations, the proposed project's cumulative impacts on energy resources would be less than significant.

MITIGATION

Implementation of **Mitigation Measure MM 4.3.1(h)**.

DOCUMENTATION

California Air Resources Board. 2016. In-Use Off-Road Diesel-Fueled Fleets Regulation Overview. https://ww3.arb.ca.gov/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf. Accessed February 2021.

_____. 2016. Mobile Source Strategy. <https://www.arb.ca.gov/planning/sip/2016sip/2016mobsrsrc.pdf>. Accessed March 2020.

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 type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

National Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction (NEHR) Act 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).

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 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 (IBC) used widely throughout the country. The CBSC has been modified for California conditions to include more detailed and/or more stringent regulations.

LOCAL

Shasta County

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

Chapter 5.1, Seismic and Geologic Hazards		
Objectives:	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.
	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.
Policies:	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 Alquist-Priolo Earthquake Fault Zoning Maps show that the closest Special Study Zone is the Rocky Ledge Fault Zone, ±40 miles northeast of the project area. USGS earthquake fault map show that the potentially active Battle Creek fault zone, which consists of closely parallel faults that parallel Cottonwood Creek, is ±20 miles south of the project site. Although these fault lines could produce low to moderate ground shaking, earthquake activity has not been a serious hazard in the area, and no significant damage or loss of life due to earthquakes has occurred near or in the County. Further, the project does not include any components that would increase the likelihood of a seismic event or increase the exposure of people or structures to risks associated with a seismic event; therefore, there would be no impact.

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. This is most likely to occur in alluvial (geologically recent, unconsolidated sediments) and stream channel deposits, especially when the groundwater table is high.

As shown in **Table 4.7-1**, it is possible that liquefaction could occur in some areas due to soil type; however, improvement plans for the proposed project would be prepared by a registered professional engineer to ensure special design and/or construction methods are implemented to reduce or eliminate potential impacts. With implementation of standard engineering design measures, the potential for liquefaction is less than significant.

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

Soil Name	Acres	Landform and Parent Material	Depth to Weathered Bedrock	Depth to Water Table	Erosion Potential	Shrink-Swell Potential
Auburn loam, 0 to 8 percent slopes (AnB)	1.4	Mountains; residuum weathered from metavolcanics	24-28 inches	Over 80 inches	Slight to Moderate	Moderate
Auburn very stony loam, 8 to 30 percent slopes (ArD)	4.0	Mountains; residuum weathered from metavolcanics	20-24 inches	Over 80 inches	Moderate to High	Moderate
Auburn clay loam, 8 to 30 percent slopes, eroded (AsD2)	8.0	Mountains; residuum weathered from metavolcanics	27-31 inches	Over 80 inches	Moderate to High	Moderate
Auburn very stony clay loam, 30 to 50 percent slopes, eroded (AtE2)	0.9	Mountains; residuum weathered from metavolcanics	27-31 inches	Over 80 inches	High	Moderate
Churn gravelly loam, 0 to 3 percent slopes (CeA)	0.8	Terraces; alluvium	Over 80 inches	Over 80 inches	None	Low to Moderate
Churn gravelly loam, 3 to 8 percent slopes (CeB)	0.6	Terraces; alluvium	Over 80 inches	Over 80 inches	Slight to Moderate	Low to Moderate
Churn gravelly loam, deep, 0 to 3 percent slopes (CfA)	2.7	Terraces; alluvium	Over 80 inches	Over 80 inches	None to Slight	Low to Moderate
Diamond Springs very stony sandy loam, 8 to 30 percent slopes, eroded (DfD2)	0.7	Mountains; residuum weathered from metavolcanics	50-54 inches	Over 80 inches	Moderate to High	Low
Goulding very rocky loam, 30 to 50 percent slopes, eroded (GeE2)	0.9	Mountains; residuum weathered from greenstone	16-20 inches	Over 80 inches	High	Low
Kanaka sandy loam, 3 to 15 percent slopes (KbC)	1.4	Mountains; residuum weathered from metavolcanics	48-52 inches	Over 80 inches	Slight to Moderate	Low
Perkins gravelly loam, 3 to 8 percent slopes (PmB)	0.7	Terraces; alluvium	Over 80 inches	Over 80 inches	Slight to Moderate	Low to Moderate

Perkins gravelly loam, moderately deep, 3 to 8 percent slopes (PoB)	2.7	Terraces; alluvium	Over 80 inches	Over 80 inches	Slight to Moderate	Low to Moderate
Riverwash (Rw)	0.4	Drainageways; gravelly alluvium	-	-	Very High	Low

Sources: U.S. Department of Agriculture, Natural Resources Conservation Service, 2021; USDA, Soil Conservation Service and Forest Service, Soil Survey of Shasta County Area, California, 1974.

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. Landslides are more likely to occur in steep areas with weak rocks where the soil is saturated from heavy rains or snowmelt. The proposed project does not include extensive grading on steep slopes; therefore, potential impacts associated with landslides are 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 shown in **Table 4.7-1**, some of the soils on the project site are shown to have a moderate to high potential for erosion.

As noted in Section 1.8 (Regulatory Requirements), the MGCSD is 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. 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. In the project area, unstable soils can occur near streams and creeks. 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. As shown in **Table 4.7-1**, none of the soils in the project area has a high shrink-swell potential. In addition, improvement plans for the proposed project would be prepared by a registered professional engineer to ensure any special design or construction methods are implemented to minimize or avoid potential impacts. Therefore, impacts would be less than significant.

Question E

The proposed project does not include the installation or use of alternative wastewater disposal systems. Therefore, there would be no impact.

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. According to the California Geological Survey, there are formations in the study area that are old enough to contain paleontological resources; however, there is no record of paleontological resources in the project area, and the project area has no unique geological features. Further, the majority of work would be conducted in previously disturbed areas and the potential for the inadvertent discovery of paleontological resources is low. Therefore, impacts would be less than significant.

CUMULATIVE IMPACTS

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.

As discussed above, all development projects in the County 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 is required for all public utility projects. Therefore, the proposed project's cumulative impacts are less than significant.

MITIGATION

None necessary.

DOCUMENTATION

- California Department of Conservation.** 2020. Alquist-Priolo Earthquake Fault Zoning Act. <http://www.conservation.ca.gov/CGS/rghm/ap/>. Accessed December 2020.
- _____. 2015. Fault Activity Map of California. <http://maps.conservation.ca.gov/cgs/fam/>. Accessed December 2020.
- _____. 2010. Geologic Map of California. <http://www.quake.ca.gov/gmaps/GMC/stategeologicmap.html>. Accessed December 2020.
- _____. 1997. Special Publication 42, Fault-Rupture Hazard Zones in California. <http://www.lib.berkeley.edu/EART/UCONLY/CDMG/north/sp42.pdf>. Accessed December 2020.
- State of California, Water Resources Control Board.** 2013. Construction General Permit (2009-009-DWQ). http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf. Accessed December 2020.
- U.C. Berkeley, Museum of Paleontology.** 2020. Fossil Index. <https://ucmpdb.berkeley.edu/>. Accessed December 2020.
- University of Southern California, Southern California Earthquake Center.** 1999. Recommended Procedures for Implementing DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction Hazards in California. https://www.tugraz.at/fileadmin/user_upload/Institute/IAG/Files/33_Liquefaction_Mitigation-DMG_SP117.pdf. Accessed December 2020.
- U.S. Department of Agriculture, Natural Resource Conservation Service.** 2021. Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed February 2021.
- _____. 1974. Soil Survey of Shasta County Area, California.

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 checked="" type="checkbox"/>	<input 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 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 MT CO_{2e} per capita by 2030 and no more than 2 MT CO_{2e} per capita by 2050, which is consistent with the State's long-term goals.

Senate Bill 32/Assembly Bill 197

These two bills were signed into legislation on September 8, 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 that GHG emissions reductions be achieved in a manner that benefits the state's most disadvantaged communities. 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. AB 197 also provides more legislative oversight of CARB by adding two new legislatively appointed non-voting members to the CARB Board and limiting the term length of Board members to six years.

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 to develop integrated resource plans that incorporate a GHG emission reduction planning component beginning January 1, 2019. SB100 (2018) codified targets of 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045.

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.

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 in the applicable Regional Transportation Plan that demonstrates how the region will meet the GHG emissions reduction targets.

Mobile Source Strategy

CARB's Mobile Source Strategy, adopted in 2016, 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.

Senate Bill 210 (2019), Heavy-Duty Vehicle Inspection and Maintenance Program

Under SB 210, heavy-duty diesel trucks will have to pass a smog check to ensure vehicle emission controls are maintained in order to register or operate in California. Upon implementation of the Program, CARB must provide mechanisms for out-of-state owners of heavy-duty vehicles to establish and verify compliance with State regulations for heavy-duty diesel trucks prior to entering the State.

Senate Bill 44 (2019), Medium- and Heavy-Duty Vehicles: Comprehensive Strategy

SB 44 requires CARB to update the State's Mobile Source Strategy no later than January 1, 2021, to include a comprehensive strategy to reduce emissions from medium- and heavy-duty vehicles in order to meet federal ambient air quality standards and reduce GHG emissions from this sector. The Bill also requires CARB to establish emission reduction goals for 2030 and 2050 for medium- and heavy-duty vehicles.

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 VMT.

In *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 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 ₂)	Carbon dioxide (CO ₂) is the primary greenhouse gas emitted through human activities. In 2014, CO ₂ accounted for about 80.9 percent of all U.S. greenhouse gas emissions from human activities. The main human activity that emits CO ₂ 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 ₂ .
Methane (CH ₄)	Methane (CH ₄) 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 ₂ O)	In 2014, nitrous oxide (N ₂ 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 ₂ 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.
Perfluorocarbons (PFCs)	Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF ₄), perfluoroethane (C ₂ F ₆), perfluoropropane (C ₃ F ₈), perfluorobutane (C ₄ F ₁₀), perfluorocyclobutane (C ₄ F ₈), perfluoropentane (C ₅ F ₁₂), and perfluorohexane (C ₆ F ₁₄). Perfluorocarbons are produced as a byproduct of various industrial processes associated with aluminum production and the manufacturing of semiconductors.

Greenhouse Gas	Description
Sulfur hexafluoride (SF ₆)	Sulfur hexafluoride (SF ₆) is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF ₆ 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 ₆ produced worldwide.
Nitrogen trifluoride (NF ₃)	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 (BAU) emissions with the implementation of state and federal reduction measures. The County has not adopted thresholds of significance for greenhouse gases. According to SCAQMD staff, the District's greenhouse gas policy is to quantify, minimize, and mitigate greenhouse gas emissions, as feasible.

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 CO₂ equivalent (CO₂e) 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 ₂	1	50 -200
CH ₄	25	12
N ₂ O	298	114
HFCs	Up to 14,800	Up to 270
PFCs:	7,390-12,200	2,600 – 50,000
SF ₆	22,800	3,200
NF ₃	17,200	740

Source: U.S. Environmental Protection Agency, 2020.

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 MGCSD nor Shasta County 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 CO₂e (Tehama County) to 1,100 MT/year CO₂e for both construction and operational emissions and 10,000 MT/year CO₂e for stationary sources (various communities in the Sacramento Valley and Northeast Plateau air basins).

The proposed project does not include any components that would result in a permanent increase in GHG emissions above existing levels, either directly or indirectly; therefore, only GHGs associated with construction activities were considered. For this project, the MGCSD has determined that a conservative threshold of 900 MT/year CO₂e for construction emissions is appropriate.

Project GHG Emissions

GHG emissions for the proposed project were estimated using the CalEEMod.2016.3.1 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. As noted above, the project does not include any components that would result in an increase in operational emissions over existing levels, and only construction-related GHG emissions were considered.

Site-specific inputs and assumptions for the proposed project include, but are not limited to, the following. Output files, as well as site-specific inputs and assumptions, are provided in **Appendix A**.

- Emissions from construction are based on all construction-related activities associated with proposed and future uses, including but not limited to grading, use of construction equipment, material hauling, trenching, and site preparation.
- Demolition activities would generate approximately 8,010 tons of solid waste, mainly pavement that is removed to accommodate the proposed improvements.
- 7,660 cubic yards (CY) of dirt would be imported and 8,260 CY of dirt would be exported.
- Construction would commence in the spring of 2023 and would be completed in approximately 12 months.

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
Construction-Related Greenhouse Gas Emissions**

Total Construction Emissions (Metric Tons)				
Year	Carbon Dioxide (CO₂)	Methane (CH₄)	Nitrous Oxide (N₂O)	Carbon Dioxide Equivalent (CO₂e)
2023	294.58	0.08	0	296.69
2024	27.82	Trace	0	28.04
Total	322.4	0.081	0	324.73

As indicated in Table 4.8-3, CO₂e associated with construction of the proposed project would not exceed the referenced numerical threshold of 900 MT/year of CO₂e. In addition, as stated in Section 4.6 under Questions A and B, the project includes replacement of water mains that have a history of significant leaks and failures, which will reduce the amount of energy required for raw surface water pumping, groundwater pumping, and water treatment, thereby reducing indirect GHG emissions associated with use of electricity. Further, eliminating dead-end water lines will eliminate the need for CSD staff to flush the lines on a weekly basis, resulting in a decrease in VMT. In addition, two of the PRV stations would be operated with solar power, which would reduce GHGs associated with the use of electricity. Therefore, potential impacts associated with GHG emissions would be less than significant.

Question B

See discussion under Regulatory Context and Question A above. There are no adopted local plans associated with GHG emissions. MGCSD would ensure compliance with applicable State regulations adopted for the purpose of reducing GHG emissions through contractual obligations. Therefore, the project would not 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. As documented above, construction-related GHG emissions would not exceed the referenced numerical threshold of 900 MT/year CO₂e, and there would be no increase in VMT, energy use or GHG emissions as a result of project operation. Therefore, the proposed project’s contribution to cumulative GHG emissions would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Natural Resources Agency. 2018. Safeguarding California Plan: 2018 Update. <http://resources.ca.gov/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf>. Accessed October 2020.

California Environmental Protection Agency, Air Resources Board. 2018. California Global Warming Solutions Act of 2006 (AB 32) Scoping Plan Website. <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed March 2021.

California Office of Planning and Research. 2018. Discussion Draft: CEQA and Climate Change Advisory. http://opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Advisory.pdf. Accessed March 2021.

Shasta County. 2012. Draft Shasta Regional Climate Action Plan. http://www.co.shasta.ca.us/index/drm_index/aq_index/programs/RCAP/Draft_RCAP.aspx. Accessed March 2021.

United States Environmental Protection Agency. 2020. Overview of Greenhouse Gases. <https://www.epa.gov/ghgemissions/overview-greenhouse-gases#f-gases>. Accessed March 2021.

_____. 2020. Understanding Global Warming Potentials. <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>. Accessed March 2021.

University of California, Berkeley Law. 2021. California Climate Policy Dashboard. <https://www.law.berkeley.edu/research/cee/research/climate/climate-policy-dashboard/>. Accessed March 2021.

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"/>
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

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)

The California Occupational Safety and Health Administration (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 the California Accidental Release Prevention Program (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.

California Public Resources Code (Wildland Fires)

In areas of the State designated by CAL FIRE as being within a Very High Fire Hazard Severity Zone (VHFHSZ), construction contractors are required to comply with the following provisions of the California Public Resources Code (PRC):

- PRC §4427. On days when burning permits are required, flammable materials shall be removed within ten feet of equipment that could create a spark, fire, or flame. In addition, a round point shovel no less than 46-inches in length, and one backpack pump water-type fire extinguisher shall be provided for use at the immediate work area.
- PRC §4431. On days when burning permits are required, portable tools powered by a gasoline-fueled internal combustion engine shall not be used within 25 feet of any flammable material without providing a round point shovel no less than 46-inches in length, or one serviceable fire extinguisher for use at the immediate work area.
- PRC §4442. Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire.

LOCAL

Shasta County

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

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

Objectives:	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.
	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.

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.

DISCUSSION OF IMPACTS

Questions A and B

The project would not result in any long-term impacts related to the transport of hazardous materials. 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, the schools nearest to the project site are Quail Creek Academy (grades 1-12), a private school on Kitty Hawk Lane, approximately 300 feet northeast of the project site, and Grand Oaks State Preschool/Elementary School (K-8) on Grand Avenue, approximately 0.6 miles southwest of the South Water Tank site.

As described under Questions A and B above, although 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 Department of Toxic Substances Control (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 shows that the nearest active clean-up site is the Flying J Service Station on Shasta Dam Boulevard, approximately one mile southwest of the South Water Tank site. Due to the distance between the project site and the clean-up site, there would be no impact.

Question E

According to the Shasta County General Plan, the project area is not within an airport land use plan area. According to the Federal Aviation Administration, the nearest public airport is Benton Airpark, approximately 10 miles southwest of the project site. There is also a private airstrip, Tews Field, on Moody Creek Drive, approximately 1.25 miles southwest of the southern extent of improvements on Old Oregon Trail. The proposed project does not include any components that would introduce people to the area in the long-term or create a safety hazard associated with an airport; therefore, potential impacts are 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.

In addition, pursuant to Cal/OSHA requirements, temporary traffic control during completion of activities 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 California Manual on Uniform Traffic Control Devices (MUTCD).

The MGCSD will also be required to obtain an encroachment permit from Shasta County prior to working in the public road ROW. At the discretion of the County, the MGCSD may be required to submit a temporary traffic control plan for review and approval by the County prior to issuance of an encroachment permit. 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. An encroachment permit from Caltrans also may be required for work in the State ROW. Standard conditions of the Caltrans permit require that traffic control measures are implemented to ensure public safety, and that work is conducted in a manner that ensures that traffic is not unreasonably delayed. Compliance with conditions of the County permit and Caltrans permit (if required) 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

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. However, 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. As discussed under Regulatory Context, the project is located within a VHFSZ and is subject to PRC regulations that require earthmoving and portable equipment with internal combustion engines to be equipped with a spark arrestor to reduce the potential for igniting a wildland fire. In addition, the contractor must clear work areas of dried

vegetation or other materials that could serve as fire fuel, and appropriate fire-fighting equipment must be provided in the immediate work area. Compliance with existing regulations ensures that the potential for impacts associated with fires is less than significant.

CUMULATIVE IMPACTS

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 during construction 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. These regulations ensure that impacts are less than significant and that activities do not result in impacts that would be cumulatively considerable.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Transportation. 2020. California Manual on Uniform Traffic Control Devices. <https://dot.ca.gov/programs/safety-programs/camutcd>. Accessed February 2021.

California Environmental Protection Agency. 2021. Cortese List Data Resources. <https://calepa.ca.gov/sitecleanup/corteselist/>. Accessed February 2021.

Federal Aviation Administration. 2020. Airport Facilities Data. https://www.faa.gov/airports/airport_safety/airportdata_5010/menu/. Accessed December 2020.

Shasta County. 2021. Office of Education Map. <https://maps.co.shasta.ca.us/portal/apps/webappviewer/index.html?id=62fcdff972e64675a724e8fa43235b98>. Accessed February 2021.

_____. January 2018. Hazardous Materials Area Plan. <https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/ehd-docs/areaplan>. Accessed March 2020.

_____. 2004. Shasta County General Plan, Chapter 5.6 (Hazardous Materials). https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/docs/56hazmat.pdf?sfvrsn=d6132daa_0. Accessed March 2020.

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 type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 No. 2009-009-DWQ), 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 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 R5-2016-0076-01 (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.

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:

Chapter 5.2, Flood Protection; Chapter 6.6, Water Resources and Water Quality		
Objective:	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.
Policies:	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 4.6 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 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 MGCSD 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 MGCSD 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 site is not located in a medium or high priority basin, and there is not a sustainable groundwater management plan that applies to the proposed project. Compliance with CVRWQCB permit conditions ensures that 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. Additionally, the proposed project would not increase the amount of impervious surface in the area in a manner that would prevent the infiltration of water into the soil. Thus, the project would not impede sustainable groundwater management of the basin. There would be no impact.

Question C

The proposed project includes installation of subsurface pipelines, associated water services, PRVs, and fire hydrants. Although the project would include installation of two segments of pipe through intermittent streams using open-cut trenching, these areas would be restored to preconstruction contours in accordance with resource agency permit conditions, and flood flows would not be permanently impeded or redirected.

Paved areas that are disturbed during construction would be re-paved following installation of these improvements; however, the project does not include the addition of new impervious surfacing that would increase the rate or amount of surface runoff or otherwise affect drainage patterns in the area. In addition, as discussed under Question A, BMPs would be implemented throughout construction to minimize erosion and runoff in accordance with existing regulations; 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 100 miles east of the Pacific Ocean, and there is no risk of tsunami.

A seiche is a large wave generated in an enclosed body of water in response to ground shaking. Seiches could potentially be generated in Lake Shasta due to very strong ground-shaking; however, as discussed in Section 4.7 under Question A, the closest potentially active faults are in the Battle Creek fault zone, approximately 20 miles south of the project site. Although these fault lines could produce low to moderate ground shaking, it is not likely that such ground shaking would cause a seiche large enough to overtop Shasta Dam.

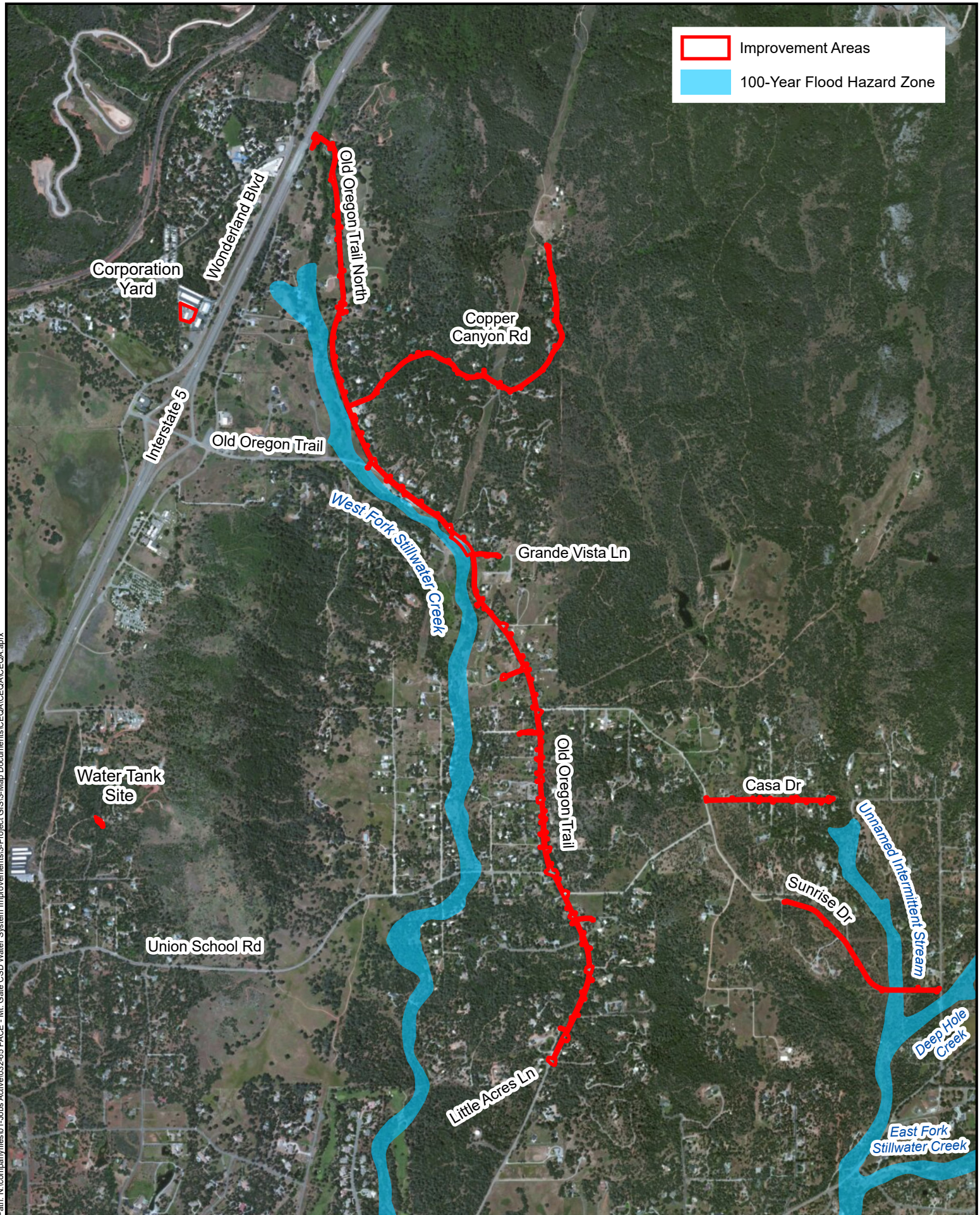
According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (Panels 06089C1229G, 06089C1237G, and 06089C1245G, effective March 17, 2011), work would occur in or adjacent to the 100-year flood hazard zone of West Fork Stillwater Creek, and in the 100-year flood hazard zone of the unnamed tributary to Deep Hole Creek (see **Figure 4.10-1**).



As discussed under Question C, pipe would be installed at two creek crossings using open-cut trenching; however, these areas would be restored to preconstruction contours in accordance with resource agency permit conditions. None of the fire hydrants or other above-ground structures that have a potential to be affected by flood flows would be installed within the floodplain boundaries. The potential for release of pollutants due to flooding is less than significant.

CUMULATIVE IMPACTS

The proposed project and other potential cumulative projects in the region, including growth resulting from build-out of the County's 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



	Improvement Areas
	100-Year Flood Hazard Zone

Path: N:\companyfiles\01_Jobs Active\032-65 PACE - MI. Gate CSD Water System Improvements\3-Project GIS\3-Map Documents\CEQA\CEQA\CEQA.aprx

All depictions are approximate. Not a survey product. 04.13.2021




Figure 4.10-1
100-Year Flood Hazard Zone

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

None necessary.

DOCUMENTATION

California Department of Water Resources. 2021. Sustainable Groundwater Management Act, Basin Prioritization Dashboard. <https://gis.water.ca.gov/app/bp-dashboard/final/>. Accessed February 2021.

_____. 2020. Groundwater Information System (GAMA). <https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/default.asp?CMD=runreport&myaddress=40.6804279%2C+-122.37084190000002&zI=15>. Accessed December 2020.

Central Valley Regional Water Quality Control Board. 2016. Water Quality Control Plan for the Sacramento and San Joaquin River Basins. https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/2016july_1994_sacsjr_bp_as.pdf. Accessed March 2020.

Shasta County. 2018. Shasta County Code of Ordinances, Chapter 12.12 (Grading, Excavating, and Filling). https://library.municode.com/ca/shasta_county/codes/code_of_ordinances?nodeId=CD_ORD_TI12STSIPUPL_CH12.12GREXFI_12.12.010PU. Accessed July 2019.

Federal Emergency Management Agency. 2021. National Flood Hazard Map (Panels 06089C1229G, 06089C1237G, and 06089C1245G, effective March 17, 2011). <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>. Accessed February 2021.

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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

REGULATORY CONTEXT

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

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 1.9, the proposed project would not conflict with any plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. No additional mitigation measures are necessary.

CUMULATIVE IMPACTS

Cumulative projects in the vicinity of the project area, including population growth resulting from build-out of the County's 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

No additional mitigation necessary.

DOCUMENTATION

Shasta County. 2004. Shasta County General Plan.

https://www.co.shasta.ca.us/index/drm_index/planning_index/plng_general_plan.aspx.

Accessed March 2020.

_____. 2018. Shasta County Code of Ordinances. Title 17, Zoning.

https://www.municode.com/library/ca/shasta_county/codes/code_of_ordinances?nodeId=CD_OR_D_TIT17ZO. Accessed March 2020.

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

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

STATE

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

The CGS identifies two active quarries in proximity to the project area: Falkenbury Shale Quarry (Lehigh Southwest Cement), 0.5 miles northwest of the study area, and Mountain Gate Quarry (Stimpel-Wiebelhaus), one mile northeast of the project area. Due to the distance from the project area, the project would not interfere with existing mining operations. In addition, the project area is not zoned for mineral resource extraction, and there are no known mineral resources of value in the project area. Therefore, there would be no impact on mineral resources.

CUMULATIVE IMPACTS

As stated above, the proposed project would not result in impacts to mineral resources; therefore, the proposed project would not contribute to adverse cumulative impacts to mineral resources.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Conservation, Division of Mine Reclamation. 2021. Mines Online Maps. <https://maps.conservation.ca.gov/mol/index.html>. Accessed February 2021.

Shasta County. 2021. Shasta County General Plan and Zoning Maps. <https://maps.co.shasta.ca.us/ShastaCountyMap/>. Accessed February 2021.

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>

NOISE FUNDAMENTALS

Commonly used technical acoustical terms are defined as follows:

- Acoustics** The science of sound.
- Ambient Noise** The distinctive pre-project acoustical characteristics of a given area consisting of all noise sources audible at that location.
- A-Weighting** 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.
- Decibel, or dB** 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.

REGULATORY CONTEXT

FEDERAL

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

DISCUSSION OF IMPACTS

Question A

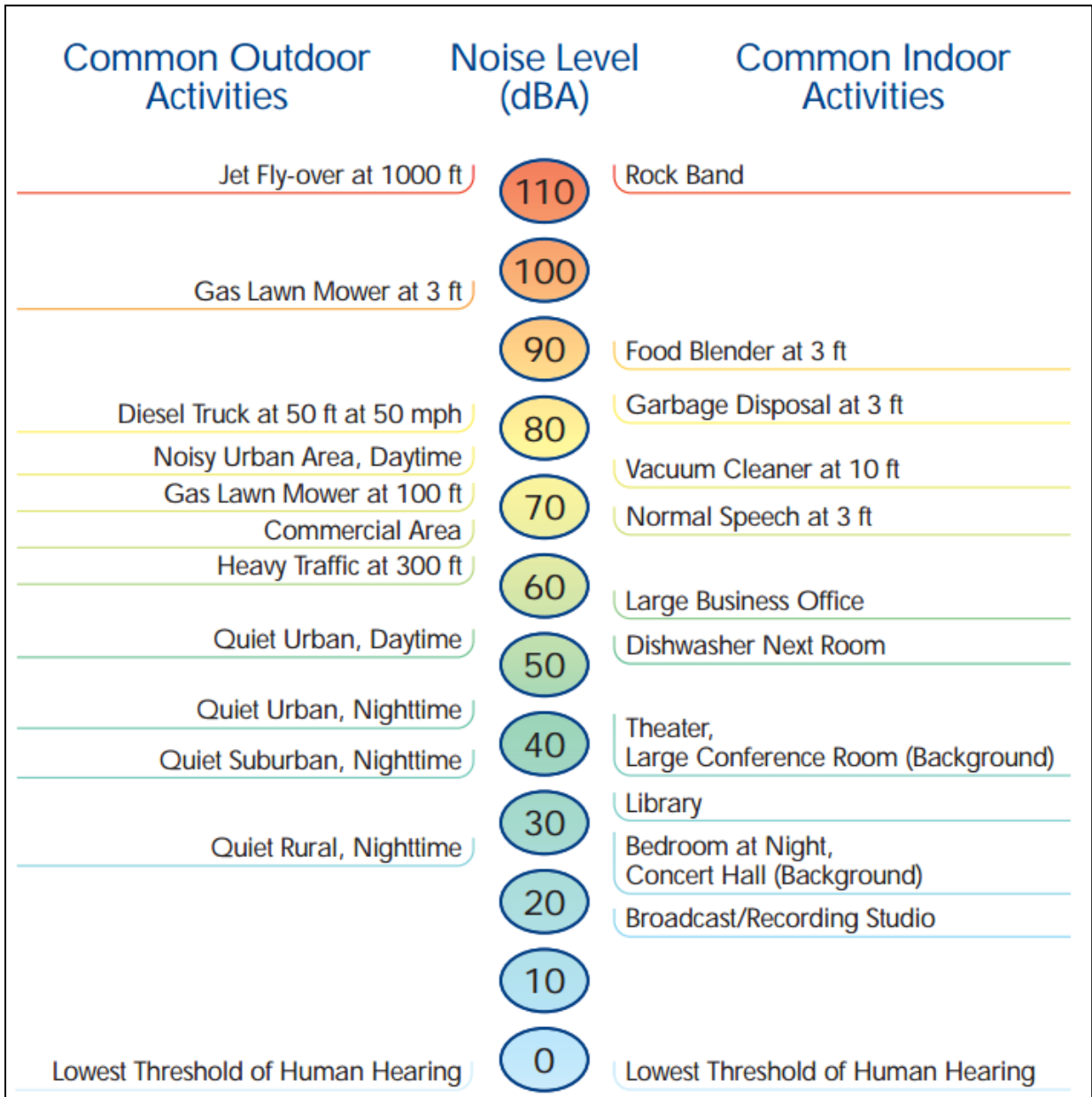
Some individuals and groups of people are considered more sensitive to noise than others and are more likely to be affected by the existence of noise. A sensitive receptor is defined as any living entity or aggregate of entities whose comfort, health, or well-being could be impaired or endangered by the existence of noise. Locations that may contain high concentrations of noise-sensitive receptors include residential areas, schools, parks, churches, hospitals, and long-term care facilities. 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 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).

The project does not include any components that would result in a permanent increase in noise levels in the area. Construction activities associated with the project would temporarily increase noise levels at nearby sensitive land uses. Construction would occur as close as 50 feet from single-family residences on Old Oregon Trail North, Old Oregon Trail, Copper Canyon Road, Grande Vista Lane, Lazy J Lane, Webula Drive, El Teda Lane, and Casa Drive, 200 feet from residences on Sunrise Drive and Kitty Hawk Lane, and 350 feet from the private school on Kitty Hawk Lane.

Work at the South Water Tank site would occur within about 200 feet of a residence to the east on Peppernut Drive, 350 feet from a residence to the northwest on Holiday Road, and 350 feet from a residence to the southwest on Lee View Lane. 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. 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.

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. Federal Highway Administration, 2017.

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.

At an attenuation rate of 6 dBA, 74 to 89 dBA noise levels would drop to 62 to 77 dBA at a distance of 200 feet, and 57 to 72 dBA at a distance of 350 feet.

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, 2018.

In addition, as shown in **Table 4.13.3**, the sum of two 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; if the sound level from one source is 80, and the sound level from the second source is 89 dB, the level from both sources together would be 89.5.

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, 2018.

With two pieces of equipment with a noise level of 89 dBA operating simultaneously noise levels could reach approximately 92 dBA at the exterior of single-family residences within 50 feet of the work area, 80 dBA at 200 feet, and 75 dBA at 350 feet.

As noted above, 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 67 to 72 dBA when equipment operates within 50 feet of a residence, 55 to 60 dBA within 200 feet, and 50 to 55 dBA within 350 feet, 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 audible above the surrounding noise level 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 (± 5 dB), some construction vehicles are pre-equipped with non-adjustable alarms that range from 97 to 112 dBA; such noise levels could temporarily be experienced at the exterior of single-family residences within 50 feet of the work areas. Depending on the decibel level of the alarm, interior noise levels could reach 87 to 92 dBA, provided that 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).

In the worst-case scenario, exterior noise levels from construction equipment operation could reach approximately 92 dBA at the exterior of single-family residences within 50 feet of the work areas and could reach approximately 112 dBA if reverse signal alarms are used.

However, construction equipment does not operate continuously throughout the entire work day. In addition, given the linear nature of the project, construction equipment would be operating adjacent to a particular residence for a relatively short duration and would then proceed to the next work area. 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 the nearby residences would be moderate.

In order to minimize impacts from construction noise, **Mitigation Measure MM 4.3.1(h)** prohibits motorized construction equipment to be left idling for more than five minutes when not in use, **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.

Therefore, because the proposed project does not include any components that would result in a permanent increase in ambient noise levels; there is no expectation that noise levels during construction would be at a duration and intensity that would cause hearing loss; and **Mitigation Measures MM 4.3.1(h)**, and **MM 4.13.1** through **MM 4.13.3** minimize noise during construction, impacts would be less than significant. Further, construction noise is a temporary impact that would cease at completion of the project.

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 (2013), 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, 2013

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, 2013

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, 2013.

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_{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, a vibratory roller at a distance of 50 feet would generate a PPV of 0.11 inches per second, while a large bulldozer would generate a PPV of up to 0.04 inches per second. As shown in **Table 4.13-5**, these vibration levels would be distinctly perceptible to strongly perceptible but would not rise to a level that would be considered disturbing.

In addition, as shown in **Table 4.13-4**, vibration levels would not be at a level that would cause structural damage. Because increased ground-borne vibration is temporary and would cease at completion of the project, and **Mitigation Measure MM 4.13.1** would reduce the potential for human annoyance by limiting construction hours, impacts would be less than significant.

Question C

See discussion in Section 4.9 under Question E. The nearest public airport is Benton Airpark, approximately 10 miles southwest of the project site. There is also a private airstrip, Tews Field, on Moody Creek Drive, approximately 1.25 miles southwest of the southern extent of improvements on Old Oregon Trail; however, the project does not include any components that would introduce people to the area in the long-term and there would be no impact.

CUMULATIVE IMPACTS

The proposed project would result in a temporary increase in daytime noise levels during construction activities. However, given the linear nature of the project, noise and vibration would be intermittent and occur for short periods of time until the equipment proceeds to the next work area. With implementation of **Mitigation Measures MM 4.13.1 through MM 4.13.3** and **MM 4.3.1**, the proposed project's contribution to cumulative noise impacts would be less than significant.

MITIGATION

Implementation of Mitigation Measure MM 4.3.1(h).

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 Mountain Gate 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.

DOCUMENTATION

California Department of Transportation. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. https://www.dtsc-ssfl.com/files/lib_ceqa/ref_draft_peir/Chap4_10-Noise/Caltrans_2013a_Tech_Noise_Supplement.pdf. Accessed March 2020.

Centers for Disease Control and Prevention. 2019. Hearing Loss Prevention Website. https://www.cdc.gov/nceh/hearing_loss/default.html. Accessed March 2020.

Engineering ToolBox. 2003. *Adding Decibels*. https://www.engineeringtoolbox.com/adding-decibel-d_63.html. Accessed March 2020.

Federal Aviation Administration. 2018. Airport Facilities Data. <https://www.faa.gov/airports/>. Accessed March 2020.

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

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

DISCUSSION OF IMPACTS

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. As stated in Section 3.1 (Project Background, Need, and Objectives), the purpose of the proposed project is to replace aging infrastructure, achieve adequate fire flows, provide adequate fire protection, reduce ongoing maintenance costs, reduce the potential for contamination due to leaks and dead-end waterlines, improve water quality, and ensure a safe and reliable potable water supply

for customers in the MGCS D’s water service area. The improvements do not anticipate growth in the MGCS D service area beyond that identified in the Shasta County General Plan. Therefore, there would be no impact.

Questions B and C

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

CUMULATIVE IMPACTS

As documented above, the proposed project would not directly or indirectly induce substantial unplanned population growth in the area. Therefore, the proposed project would not contribute to cumulative impacts associated with population and housing.

MITIGATION

None necessary

DOCUMENTATION

Shasta County. 2004. Shasta County General Plan).
https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/docs/7-1-communityorganizationamended-08-26-2014-gpa10-002.pdf?sfvrsn=ca1ef89_2. Accessed March 2020.

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

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

DISCUSSION OF IMPACTS

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 substantial 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

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

MITIGATION

None necessary

DOCUMENTATION

Shasta County. 2004. Shasta County General Plan.
https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/docs/7-1-communityorganizationamended-08-26-2014-gpa10-002.pdf?sfvrsn=ca1ef89_2. Accessed March 2020.

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

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

DISCUSSION OF IMPACTS

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 substantial 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

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

None necessary

DOCUMENTATION

Shasta County. 2004. Shasta County General Plan.
https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/docs/7-1-communityorganizationamended-08-26-2014-gpa10-002.pdf?sfvrsn=ca1ef89_2. Accessed March 2020.

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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

REGULATORY CONTEXT

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

Questions A through D

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. The proposed project does not include any components that would remove or change the location of any sidewalk, bicycle lane, trail, or public transportation facility.

As discussed in Section 4.9 under Question F, there would be short-term increases in traffic in the area associated with construction workers and equipment, and this increased traffic could interfere with emergency response times. However, construction-related traffic would be minor due to the overall scale of the construction activities. In addition, temporary traffic control 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 (California MUTCD). Driveway access to private properties must be maintained at all times.

The proposed project does not include any components that would permanently increase the potential for hazards due to a design feature or incompatible uses. 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.

CUMULATIVE IMPACTS

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.

As discussed above, 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. Specific requirements for traffic safety measures would be included in the MGCSO contract documents. In addition, at the discretion of the County, the contractor may be required to submit a temporary traffic control plan for review and approval by the County prior to issuance of an encroachment permit. The plan must illustrate 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. An encroachment permit from Caltrans also may be required and would include conditions to ensure public safety, and measures to ensure that work is conducted in a manner that prevents traffic from being unreasonably delayed.

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. 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

None necessary.

DOCUMENTATION

California Department of Transportation. 2020. California Manual on Uniform Traffic Control Devices. <https://dot.ca.gov/programs/safety-programs/camutcd>. Accessed February 2021.

Shasta Regional Transportation Agency. 2018 (Updated August 2019). GoShasta Regional Active Transportation Plan. https://www.srta.ca.gov/DocumentCenter/View/4773/GoShasta_Regional_ATP_with_appendices_8-2019. Accessed December 2020.

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

Questions A and B

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

Mitigation Measures MM 4.5.2 and 4.5.3 address the inadvertent discovery of cultural resources. These measures ensure that impacts to tribal cultural resources are less than significant.

CUMULATIVE IMPACTS

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, **Mitigation Measures MM 4.5.2 and 4.5.3** address the inadvertent discovery of cultural resources; therefore, the proposed project would have less than significant cumulative impacts to tribal cultural resources.

MITIGATION

Implementation of **Mitigation Measures MM 4.5.2 and 4.5.3**.

DOCUMENTATION

ENPLAN. 2021. Cultural Resources Inventory: Mountain Gate Community Services District Water System Improvements 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 type="checkbox"/>	<input checked="" 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, the proposed project would not induce population growth in the area, either directly or indirectly. Therefore, the proposed project would not result in the need for new or expanded water, wastewater treatment, electric power, natural gas, or telecommunications facilities. In addition, no water, wastewater treatment, electric power, natural gas, or telecommunications facilities would need to be relocated to accommodate the proposed project. Therefore, there would be no impact.

Questions B and C

Relatively small amounts of water would be used during project construction, but this is a temporary impact. In addition, the project would have no demand for wastewater treatment. Therefore, 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 the Anderson Landfill in Anderson, California. According to CalRecycle, the design capacity of the Anderson Landfill is 16,353,000 cubic yards. As of January 1, 2015, the remaining capacity was 10,409,132 cubic yards, and the landfill's estimated closure year was 2093.

The construction contractor would be responsible for disposing of all construction waste. The MGCSO 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

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

None necessary

DOCUMENTATION

CalRecycle. n.d. Facility Details: Anderson Landfill, Inc. (45-AA-0020).
<https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/3457>. Accessed March 2020.

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 checked="" type="checkbox"/>	<input 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:

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

Objective:	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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Policy	FS-a	All new land use projects shall conform to the County Fire Safe Standards.
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DISCUSSION OF IMPACTS

According to FHSZ maps prepared by CAL FIRE, the project area is located within a Very High FHSZ in a State Responsibility 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 the project includes replacement of existing components of the water system in the same location. New fire hydrants would be installed throughout the water service area adjacent to roadways, and a new waterline segment would be installed in the roadway of Sunrise Drive; however, these improvements would not exacerbate fire risk in the long-term. Rather, these improvements would improve fire flows and the ability to provide adequate fire suppression in the area.

The majority of improvements would occur in paved and graveled roadways in relatively flat developed areas; however, work areas on Copper Canyon Road, Casa Drive, and Sunrise Drive are bound by heavily vegetated open space. In addition, steep slopes are located along Copper Canyon Road. During a fire, steeper slopes typically facilitate more rapid-fire spread upslope and slower spread downslope. The project site is situated such that the control of a fire originating in the vicinity may be challenging due to steep slopes, fire-prone vegetation, dry weather, high wind, or any combination of these conditions.

As stated in Section 4.9 under Question G, the project is located within a VHFSZ and is subject to PRC regulations that require earthmoving and portable equipment with internal combustion engines to be equipped with a spark arrestor to reduce the potential for igniting a wildland fire. In addition, the contractor must clear work areas of dried vegetation or other materials that could serve as fire fuel, and appropriate fire-fighting equipment must be provided in the immediate work area. Compliance with existing regulations would avoid/minimize the risk of wildfires and the exposure of people and structures to wildland fires; impacts would be less than significant.

Question D

With the exception of fire hydrants and the PRV solar panels and associated poles, proposed improvements would be subsurface and not be exposed to significant post-fire risks. Fire hydrants and the PRV solar improvements would be installed in areas with gently sloping lands with little potential for post-fire erosion, landslides or other slope instability, or drainage changes or flooding; therefore, the potential for post-fire impacts would be less than significant.

CUMULATIVE IMPACTS

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.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Forestry and Fire Protection (CAL FIRE). 2021. Fire Hazard Severity Zone Map Viewer. <https://egis.fire.ca.gov/FHSZ/>. Accessed February 2021.

Shasta County. 2004. Shasta County General Plan, Chapter 5.4 (Fire Safety and Sheriff Protection). https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/docs/54firesafety.pdf?sfvrsn=204962bd_0. Accessed March 2020.

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

Question A

As discussed in the applicable environmental resource sections above, the proposed project could result in possible effects to special-status wildlife species, disturbance of nesting migratory birds (if present), impacts to cultural resources and tribal cultural resources (if present), the introduction and spread of noxious weeds during construction, temporarily increased air emissions, and temporarily increased noise and vibration levels. However, as identified in Section 1.10, 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 risk of wildfires, temporarily increased air emissions, and temporarily increased noise and vibration levels. However, mitigation measures are included to reduce all potential impacts to a less than significant level.

SECTION 5.0 LIST OF PREPARERS

ENPLAN

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SECTION 6.0 ABBREVIATIONS AND ACRONYMS

AB	Assembly Bill
AQAP	Air Quality Attainment Plan
AQMD	Air Quality Management District
APE	Area of Potential Effects
BAMM	Best Available Mitigation Measures
BAU	Business as Usual
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
CalEPA	California Environmental Protection Agency
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
CCV	California Central Valley
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	Methane
CIWMA	California Integrated Waste Management Act
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
County	Shasta County
CRHR	California Register of Historical Resources
CRI	Cultural Resources Inventory and Evaluation Report
CSD	Community Services District
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act

CY	Cubic Yards
dBA	Decibels
DOC	Department of Conservation
DPS	Distinct Population Segment
DTSC	California Department of Toxic Substances Control
DWSRF	Drinking Water State Revolving Fund
EHS	Extremely Hazardous Substance
EO	Executive Order
ESU	Evolutionary Significant Unit
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Act
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
GHG	Greenhouse Gas Emissions
GSPs	Groundwater Sustainability Plans
GWP	Global Warming Potential
H ₂ S	Hydrogen Sulfide
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
HSIP	Highway Safety Improvement Program
I-5	Interstate 5
IBC	International Building Code
IS	Initial Study
LHMP	Local Hazard Mitigation Plan
LRA	Local Responsibility Area
LUP	Linear Underground/Overhead Projects
MACT	Maximum Achievable Control Technology
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MGCSO	Mountain Gate Community Services District
mg/m ³	Milligrams per Cubic Meter
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS4s	Small Municipal Separate Storm Sewer Systems
MSR	Municipal Service Review

MUTCD	California Manual on Uniform Traffic Control Devices
MWP	Master Water Plan
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
NEPA	National Environmental Policy Act
NF ₃	Nitrogen Trifluoride
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
N ₂	Nitrogen
N ₂ O	Nitrous Oxide
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen
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 ₂	Oxygen
O ₃	Ozone
OHWM	Ordinary High Water Mark
OSHA	Occupational Safety and Health Act
Pb	Lead
PF	Public Facilities
PFC	Perfluorocarbons
PM _{2.5}	Particulate Matter, 2.5 microns in size
PM ₁₀	Particulate Matter, 10 microns in size
PPB	Parts per Billion
PPM	Parts per Million
PRC	Public Resources Code
Project	Mountain Gate CSD Water 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
SCAQMD	Shasta County Air Quality Management District
SCC	Shasta County Code
SCHMRT	Shasta-Cascade Hazardous Materials Response Team
SCS	Sustainable Communities Strategy
SDWA	Safe Drinking Water Act
SF ₆	Sulfur Hexafluoride
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SMM	Standard Mitigation Measures
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SOI	Sphere of Influence
SO ₂	Sulfur Dioxide
SO ₄	Sulfates
SO _x	Sulfur Oxides
SRA	State Responsibility Area
SRWR	Sacramento River Winter-Run
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SVAQEPP	Sacramento Valley Air Quality Engineering and Enforcement Professionals
TAC	Toxic Air Contaminants
TPZ	Timberland Production Zone
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VDECS	Verified Diesel Emission Control Strategies
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle Miles Travelled
WDRs	Waste Discharge Requirements

WQO	Water Quality Objectives
WWTP	Wastewater Treatment Plant
WTP	Water Treatment Plant
µg/m ³	Micrograms per Cubic Meter

Appendix A

CalEEMod.2016.3.1 Emissions Reports

Appendix B

Biological Study Report Mountain Gate Community Services District Water System Improvement Project

Appendix C

Wetlands and Other Waters of the U.S. and/or State (Map Exhibits)