PROPOSED
MITIGATED NEGATIVE DECLARATION
AND INITIAL STUDY

Spring Hill Water Supply and Storage Project

City of Mt. Shasta, California



Prepared for:

City of Mt. Shasta
305 N. Mt. Shasta Blvd
Mt. Shasta, CA 96067

August 2025
32-54

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Redding, CA 96002

PROPOSED MITIGATED NEGATIVE DECLARATION

LEAD AGENCY:	City of Mt. Shasta
PROJECT PROPONENT:	City of Mt. Shasta
PROJECT NAME:	**City of Mt. Shasta Spring Hill Water Supply and Storage Project**
PROJECT SUMMARY:	The proposed project includes improvements to the City of Mt. Shasta's (City) water system. Improvements include installing two ~55-foot-diameter water storage tanks near the southeastern base of Spring Hill, and installing a new waterline, storm drain, and underground power line from the tanks south to Ski Village Drive; the new waterline would continue west in Ski Village Drive to an existing waterline near North Mt. Shasta Boulevard. In addition, a new well would be constructed on City-owned property on the east side of Spring Hill Road (northwest of Spring Hill), a new water line would be installed along Spring Hill Road and North Mt. Shasta Boulevard from the new well to the intersection of Ski Village Drive and North Mt. Shasta Boulevard, and electrical conduit would be installed underground from the new well to Spring Hill Road, continuing north in the ROW of Spring Hill Road for about 1,900 feet to an existing service adjacent to a commercial business. As an alternative to the new well and associated power and water lines, the City considered potentially obtaining and upgrading an existing production well (DEX-6) once used by the Dannon bottling plant. With this alternative, ~500 feet of new water line would be installed from DEX-6 to the new water tanks. Although the City has not obtained authorization from the current owner, and there are no immediate plans for the City to acquire use of DEX-6, this alternative is also addressed in the Initial Study. The purpose of the proposed project is to eliminate existing pressure deficiencies in the Big Lakes area of the City, improve fire flows, increase city-wide storage, and provide water supply reliability and resilience. Details about the proposed project are included in Section 3.0 (Project Description) of this Initial Study.
LOCATION:	The project site is located in and adjacent to the City of Mt. Shasta, primarily within the public road rights-of-way of Spring Hill Road, North Mt. Shasta Boulevard, and Ski Village Drive. Improvements are also proposed on a City-owned parcel on the east side of Spring Hill Road and on private lands near the eastern base of Spring Hill. *See **Figures 1-2** of the Initial Study.*

Findings / Determination

As documented in the Initial Study, project implementation could result in temporarily increased air emissions, possible impacts on special-status wildlife species (if present), disturbance of nesting birds (if present), loss of trees, the introduction and spread of noxious weeds during construction, impacts on cultural resources and tribal cultural resources (if present), impacts related to geologic/soils conditions, impacts on paleontological resources (if present), 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 City of Mt. Shasta 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.

Final Mitigated Negative Declaration approved by the City of Mt. Shasta on _____, 2025 by Resolution _____.

INITIAL STUDY

CITY OF MT. SHASTA

SPRING HILL WATER SUPPLY AND STORAGE PROJECT

SISKIYOU COUNTY, CALIFORNIA

LEAD AGENCY:

City of Mt. Shasta
305 N. Mt. Shasta Blvd.
Mt. Shasta, CA 96067
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PREPARED BY:

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August 2025

Table of Contents

		Page
SECTION 1.0	**INTRODUCTION**	**1**
1.1	Project Summary	1
1.2	Purpose of Study	1
1.3	Evaluation Terminology	2
1.4	Organization of the Initial Study	2
1.5	Project Location	3
1.6	Environmental Setting	3
1.7	Tribal Cultural Resources Consultation	6
1.8	Permits and Approvals	6
1.9	Environmental Factors Potentially Affected	8
1.10	Proposed Mitigation Measures	8
SECTION 2.0	**CEQA DETERMINATION**	**13**
SECTION 3.0	**PROJECT DESCRIPTION**	**14**
3.1	Project Background, Need, and Objectives	14
3.2	Project Components / Physical Improvements	15
SECTION 4.0	**ENVIRONMENTAL IMPACT ANALYSIS**	**17**
4.1	Aesthetics	17
4.2	Agriculture and Forest Resources	25
4.3	Air Quality	29
4.4	Biological Resources	39
4.5	Cultural Resources	56
4.6	Energy	62
4.7	Geology and Soils	66
4.8	Greenhouse Gas Emissions	73
4.9	Hazards and Hazardous Materials	81
4.10	Hydrology and Water Quality	87
4.11	Land Use and Planning	99
4.12	Mineral Resources	101
4.13	Noise	103
4.14	Population and Housing	115
4.15	Public Services	118
4.16	Recreation	119
4.17	Transportation	120
4.18	Tribal Cultural Resources	122
4.19	Utilities and Service Systems	126
4.20	Wildfire	131
4.21	Mandatory Findings of Significance	135
SECTION 5.0	**LIST OF PREPARERS**	**136**
SECTION 6.0	**ABBREVIATIONS AND ACRONYMS**	**137**

FIGURES

Figure 1	Project Location and Vicinity	4
Figure 2	Study Area Boundary	5
Figure 4.4-1	Observed Milkweed Locations	45
Figure 4.4-2	Biological Survey Results – Water Tanks Site, Ski Village Drive, and N. Mt. Shasta Boulevard	49
Figure 4.4-3	Biological Survey Results – Spring Hill Road and Well Site	50
Figure 4.13-1	Noise Levels of Common Activities	109

TABLES

Table 4.3-1	Federal Criteria Air Pollutants	29
Table 4.3-2	Federal and State Ambient Air Quality Standards	31
Table 4.3-3	Estimated Construction Emissions	34
Table 4.3-4	Estimated Operational Emissions	35
Table 4.7-1	Soil Type and Characteristics	69
Table 4.8-1	Greenhouse Gases	75
Table 4.8-2	Greenhouse Gases: Global Warming Potential and Atmospheric Lifetime	77
Table 4.8-3	Construction-Related Greenhouse Gas Emissions	78
Table 4.8-4	Estimated Annual Operational Greenhouse Gas Emissions	79
Table 4.10-1	City of Mt. Shasta Water Consumption and Groundwater Produced, 2019-2023	94
Table 4.13-1	Noise Standards for New Uses Affected by Non-Transportation Noise	106
Table 4.13-2	Noise Standards for New Uses Affected by Traffic and Railroad Noise	106
Table 4.13-3	Examples of Construction Equipment Noise Emission Levels	108
Table 4.13-4	Cumulative Noise: Identical Sources	110
Table 4.13-5	Cumulative Noise: Different Sources	110
Table 4.13-6	Structural Damage Threshold from Ground-Borne Vibration	112
Table 4.13-7	Human Response to Ground-Borne Vibration	112
Table 4.13-8	Examples of Construction Equipment Ground-Borne Vibration	113

APPENDICES

Appendix A	CalEEMod 2022.1.1.29 Emissions Reports
Appendix B	Biological Resources Documentation
Appendix C	Hydrogeological Reports
Appendix D	Lawrence and Associates Well Evaluation

SECTION 1.0 INTRODUCTION

1.1 PROJECT SUMMARY

Project Title:	**City of Mt. Shasta Spring Hill Water Supply and Storage Project**
Lead Agency Name and Address:	**City of Mt. Shasta** 305 N. Mt. Shasta Boulevard Mt. Shasta, CA 96067
Contact Person and Phone Number:	**Ken Kellogg, Director of Public Works** 530.926.7526
Lead Agency's Environmental Consultant:	**ENPLAN** 3179 Bechelli Lane, Suite 100 Redding, CA 96002

The proposed project includes improvements to the City of Mt. Shasta (City) water system. Improvements include installing two ~55-foot-diameter water storage tanks near the southeastern base of Spring Hill, and installing a new water line, storm drain, and underground electrical conduit from the tanks south to Ski Village Drive; the new water line would continue west on Ski Village Drive to an existing waterline near North Mt. Shasta Boulevard. In addition, a new well would be constructed on City owned property on the east side of Spring Hill Road (northwest of Spring Hill), a new waterline would be installed along Spring Hill Road and North Mt. Shasta Boulevard from the new well to the intersection of Ski Village Drive and North Mt. Shasta Boulevard, and electrical conduit would be installed underground from the new well to Spring Hill Road, continuing north in the ROW of Spring Hill Road for about 1,900 feet to an existing service adjacent to a commercial business.

As an alternative to the new well and associated power and water lines, the City considered potentially obtaining and upgrading an existing production well (DEX-6) once used by the Dannon bottling plant. With this alternative, ~500 feet of new water line would be installed from DEX-6 to the new water tanks. Although there are no immediate plans for the City to acquire use of DEX-6, this alternative is also addressed in the Initial Study in the event that the City acquires the well in the future. If the City acquires DEX-6 prior to installation of the Spring Hill Well, there would be no need to install the Spring Hill Well at this time.

The purpose of the proposed project is to eliminate existing pressure deficiencies in the Big Lakes area of the City, improve fire flows, increase city-wide storage, and provide water supply reliability and resilience. Details about the proposed project are included in Section 3.0 (Project Description) of this Initial Study.

1.2 PURPOSE OF STUDY

The City of Mt. Shasta (City), 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 Spring Hill Water Supply and Storage Project (project). This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified in California Public Resources Code (PRC) §21000 et seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. Pursuant to these regulations, this Initial Study identifies potentially significant impacts and, where applicable, includes mitigation measures that would reduce all identified environmental impacts to less-than-significant levels. This Initial Study supports a Mitigated Negative Declaration (MND) pursuant to CEQA Guidelines §15070.

1.3 EVALUATION TERMINOLOGY

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

- **No Impact.** The proposed project will not have any measurable environmental impact on the environment.
- **Less-Than-Significant Impact.** The proposed project has the potential to impact the environment; however, this impact will be below established thresholds of significance.
- **Potentially Significant Impact Unless Mitigation Incorporated.** The proposed project has the potential to generate impacts which may be considered a significant effect on the environment; however, mitigation measures or changes to the proposed project's physical or operational characteristics can reduce these impacts to levels that are less than significant.
- **Potentially Significant Impact**. The proposed project will have significant impacts on the environment, and additional analysis is required to determine if it is feasible to adopt mitigation measures or project alternatives to reduce these impacts to less than significant levels.

1.4 ORGANIZATION OF THE INITIAL STUDY

This document is organized into the following sections:

Section 1.0: **Introduction:** Describes the purpose, contents, and organization of the document and provides a summary of the proposed project.

Section 2.0: **CEQA Determination:** Identifies the determination of whether impacts associated with development of the proposed project are significant, and what, if any, additional environmental documentation may be required.

Section 3.0: **Project Description:** Includes a detailed description of the proposed project.

Section 4.0: **Environmental Impact Analysis (Checklist):** Contains the Environmental Checklist from CEQA Guidelines Appendix G with a discussion of potential environmental effects associated with the proposed project. Mitigation measures, if necessary, are noted following each impact discussion.

Section 5.0: **List of Preparers**

Section 6.0: **Abbreviations and Acronyms**

Appendices: Contains information to supplement Section 4.0.

1.5 PROJECT LOCATION

As shown in **Figure 1**, Project Location and Vicinity, the proposed project is located in and adjacent to the City of Mt. Shasta in Siskiyou County, in Sections 5, 8, and 9, Township 40 North, Range 4 West of the U.S. Geological Survey's (USGS) City of Mount Shasta 7.5-minute quadrangle. Latitude: 41° 19' 47.99" N; Longitude: 122° 19' 09.91" W.

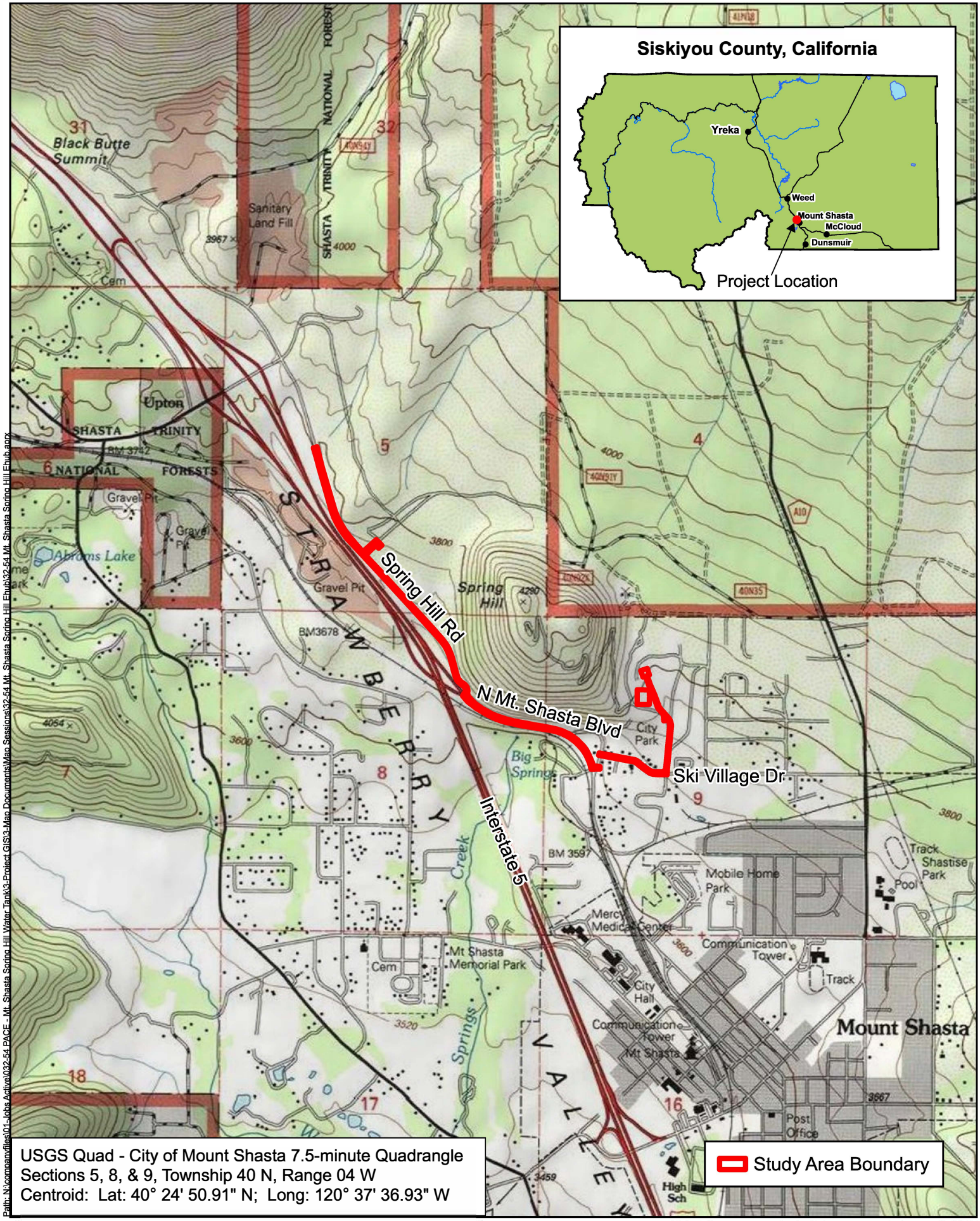
Improvements associated with the new storage tanks and associated improvements would occur outside of the City Limits in an unincorporated area of Siskiyou County, generally north of Ski Village Drive and east of North Mt. Shasta Boulevard, within a leased area on privately owned property (Siskiyou County Assessor's Parcel Numbers [APNs] 037-060-040, 037-070-060, and -210) (see **Figure 2**). **Figure 2** also shows the location of the existing DEX-6 well, which is located on APN 037-060-040.

Improvements associated with the new well off Spring Hill Road would occur within City limits on City-owned property (APN 057-781-100) (see **Figure 2**).

The water line improvements would be within the public road rights-of-way (ROWs) of Ski Village Drive (both within and outside of the City limits), North Mt. Shasta Boulevard, and Spring Hill Road. The electric conduit associated with the new well would be within the ROW of Spring Hill Road.

1.6 ENVIRONMENTAL SETTING

General Plan Designations:	**City of Mt. Shasta City Limits:**	**New Well Site:** Commercial Center **Waterline Corridor:** Commercial Center and Employment Center
	City of Mt. Shasta Planning Area (Outside of City Limits):	The County's General Plan does not include specific land use designations; rather, the County uses overlay maps to identify development constraint areas. However, the City of Mt. Shasta's General Plan includes areas beyond the City limits for planning and development. **DEX-6 Well and Water Tanks Site:** Low Density Residential
Zoning:	**City of Mt. Shasta:**	**New Well Site:** General Commercial (C-2) **Waterline Corridor:** Low Density Residential (R-1) and ROWs (Not Zoned)
	Siskiyou County:	**DEX-6 Well and Water Tanks Site:** Non-Prime Agricultural District (AG-2)
Surrounding Land Uses:	Lands adjacent to the study corridor along Spring Hill Drive are undeveloped. Land uses along Ski Village Drive include residential and commercial uses.	
Topography:	Elevations in the study area range between ~3,600 feet and ~3,800 feet above mean sea level. The Spring Hill Road well site is relatively level. The area in which the water tanks would be installed is also relatively level. The area surrounding the tank site and DEX-6 slopes moderately to the site slopes moderately to the south/southeast.	
Plant Communities/Wildlife Habitats:	Habitat types in and adjacent to the study area include montane chaparral, open conifer forest, and urban (See Section 4.4, Biological Resources).	
Climate:	The study area is characterized by a Mediterranean climate with cool, wet winters and hot, dry summers. The average annual precipitation is ~39.94 inches. Temperatures range between an average January low of 25.8 degrees Fahrenheit (°F) and an average July high of 84.9 °F.	



USGS Quad - City of Mount Shasta 7.5-minute Quadrangle
Sections 5, 8, & 9, Township 40 N, Range 04 W
Centroid: Lat: 40° 24' 50.91" N; Long: 120° 37' 36.93" W

All depictions are approximate. Not a survey product. 05.08.25

0 2,000 Feet

Figure 1

Project Location and Vicinity

ENPLAN

Path: N:\company\files\01-Jobs Active\032-54 PACE - Mt. Shasta Spring Hill Water Tank\3-Project GIS\3-Map Documents\Map Sessions\32-54 Mt. Shasta Spring Hill Ehub\32-54 Mt. Shasta Spring Hill Ehub.aprx



USGS Quad - City of Mount Shasta 7.5-minute Quadrangle
Sections 5, 8, & 9, Township 40 N, Range 04 W
Centroid: Lat: 40° 24' 50.91" N; Long: 120° 37' 36.93" W

Feet
0 600

Feature and boundary locations depicted are approximate only.
This is not a survey product.

05.08.25

ENPLAN

Figure 2

Study Area Boundary

Path: N:\company\files\01-Jobs Active\032-54 PACE - Mt. Shasta Spring Hill Water Tank\32Project GIS\ArcMap Documents\Map Sessions\32-54 Mt. Shasta Spring Hill Env\032-54 Mt. Shasta Spring Hill Env.aprx

1.7 TRIBAL CULTURAL RESOURCES CONSULTATION

Public Resources Code (PRC) §21084.2 (Assembly Bill [AB 52], 2014) establishes that *"a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment."*

Pursuant to PRC §21080.3.1, in order to determine whether a project may have such an effect, a lead agency is required to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if the tribe requested to be informed through formal notification of proposed projects in the geographical area; and the tribe responds, in writing, within 30 days of receipt of the formal notification and requests the consultation.

PRC §21080.3.1(b) requires that consultation under AB 52 commence prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report. The consultation is considered complete when the parties agree to mitigation measures to avoid significant effects on a tribal cultural resource; or a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

According to the City, the Winnemem Wintu Tribe has requested formal notification of proposed projects in the geographical area.

On February 19, 2025, the City delivered formal notification initiating tribal cultural resources consultation with Chief Caleen Sisk of the Winnemem Wintu Tribe in compliance with AB 52. No other California Native American tribes have requested that the City provide formal notification of proposed projects in the geographical area.

On March 3, 2025, Mark Miyoshi, Tribal Historic Preservation Officer (THPO) with the Winnemem Wintu Tribe responded to the City and stated that the Tribe would like to start AB 52 consultation with the City.

On March 24, 2025, THPO Miyoshi sent an email to Ken Kellogg, Public Works Director for the City, stating that he was compiling information that the Tribe prepared and submitted to the County for the previously proposed Crystal Geyser Water Bottling Plant. On May 8, 2025, Mr. Kellogg provided a copy of the Administrative Draft IS/MND to THPO Miyoshi. Mr. Miyoshi replied on May 12, 2025, and stated that he would review the information and reply to the City. As of July 28, 2025, no additional information had been provided to the City by the Tribe. The information previously provided to the County is considered confidential and is not available for public review. The City will continue to consult with the Winnemem Wintu Tribe through to adoption of the MND. Any measures necessary to protect identified tribal cultural resources will be incorporated into the MND in consultation with the Tribe.

In addition to consultation pursuant to AB 52 (2014), ENPLAN consulted with Native American tribes that were identified by the Native American Heritage Commission (NAHC). On December 10, 2024, comment solicitation letters were sent to the identified tribes. Follow-up correspondence was conducted on January 29, 2025, to the individuals that were previously identified by the NAHC. See Section 4.5 for discussion of the comments that were submitted by the Tribes in response to solicitation.

1.8 PERMITS AND APPROVALS

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

City of Mt. Shasta:

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

Siskiyou County:

- Approval of a well permit from the Siskiyou County Department of Environmental Health.
- Approval of an Encroachment Permit for work in the public road rights-of-way subject to Siskiyou County jurisdiction.

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

- Section 401 Water Quality Certification and/or Report of Waste Discharge (or waiver) if the project will impact waters of the State (see discussion in Section 4.4).
- Coverage under the National Pollutants Discharge Elimination System (NPDES) permit for *Discharges of Storm Water Runoff Associated with Construction Activity* (currently Order No. 2022-0057-DWQ, adopted September 8, 2022). Permit coverage may be obtained by submitting a Notice of Intent to the SWRCB. The permitting process requires the development and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) to reduce pollutants and any additional controls necessary to meet water quality standards.
- If construction or groundwater dewatering activities result in the discharge to land of waste with a low threat to water quality (e.g., small/temporary dewatering projects) that could affect the quality of the waters of the State, coverage under SWRCB Statewide General Order 2003-003-DWQ, *Statewide General Waste Discharge Requirements (DWRs) for Discharges to Land with a Low Threat to Water Quality*. Note: The CVRWQCB may determine that construction dewatering discharges be regulated under other WDRs or a conditional waiver, such as Resolution R5-2018-085, *Waiver of Reports of Waste Discharge and WDRs for Specific Types of Discharge within the Central Valley Region*.

State Water Resources Control Board, Division of Drinking Water:

- Approval of a Domestic Water Supply Permit amendment pursuant to the California Safe Drinking Water Act, Article 7, Section 116550, for modifications/additions to the water system.

California Department of Forestry and Fire Protection:

- Issuance of a Timberland Conversion Exemption and/or approval of a Timber Harvest Plan for tree removal on non-federal lands.

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.

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

1.10 PROPOSED MITIGATION MEASURES

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

AIR QUALITY

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, preferably in the mid-morning and after work is completed each day, with care given to work sites with bare soil.

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 surfaces.

e. All land clearing, grading, earth moving, and excavation activities on the project site shall be suspended when winds are causing excessive dust generation.

f. All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least two feet of free board in accordance with the requirements of Section 23114 of the California Vehicle Code.

g. Paved streets in and adjacent to active construction sites shall be swept or washed at the end of the day (or more frequently if needed) to remove excessive accumulations of silt and/or mud resulting from activities on the development site.

h. When not in use, motorized construction equipment shall not be left idling for more than five minutes.

BIOLOGICAL

MM 4.4.1 To avoid impacts to active bat maternity colonies, tree removal for trees of 12" diameter at breast height (DBH) or larger shall occur only during the following time frames and subject to the following weather conditions, or as otherwise approved/recommended by a qualified bat biologist:

- Between March 1 (or after evening temperatures rise above 45°F, and/or no more than ½" of rainfall within 24 hours occurs), and April 15; and
- Between September 1 and October 15 (or before evening temperatures fall below 45°F, and/or more than ½" of rainfall within 24 hours occurs).

Unless deemed unnecessary by the qualified bat biologist, trees greater than 12" DBH shall be removed using a two-step process to allow bats the opportunity to abandon the roost prior to removal. The two-step removal process shall be as follows:

- Day 1: Remove small-diameter trees, brush, and non-habitat features of large trees (branches without cavities, crevices, or exfoliating bark), using chainsaws for cutting, and chippers wherever possible to cause a level of noise and vibration disturbance sufficient to cause bats to choose not to return to the tree for a few days after they emerge to forage.
- Day 2: Remove the remainder of the trimmed tree.

MM 4.4.2 If the western migratory population of the monarch butterfly remains designated as proposed threatened, or is listed as threatened or endangered at the time of construction, the following measures shall be implemented as applicable:

a. If the final waterline alignment is located outside of the pavement on Spring Hill Road, a field survey shall be undertaken in early to mid-May (prior to arrival of the butterflies) to determine if milkweeds (*Asclepias* spp.) are present in or adjacent to the work area. If no milkweeds are present, no further action is required.

b. If milkweeds are present in or adjacent to the work area and can be avoided during construction, temporary high-visibility indicators such as marking whiskers, pin flags, stakes with flagging tape, or other markers shall be established to protect the plants; the markers/flags shall be maintained in good condition throughout the duration of construction.

c. If the milkweeds cannot be avoided, then they shall be removed as early in the season as possible. If monarchs arrive in the general project area prior to removal of the milkweeds, a biologist shall inspect each milkweed for the presence of monarch butterfly eggs, larvae, and pupae prior to plant removal. If monarch butterfly eggs, larvae, or pupae are present, the milkweed shall not be removed until the biologist determines that the milkweed is no longer hosting the monarch butterfly. This may require rescheduling of construction in those areas supporting milkweeds.

d. If removal of milkweeds is required at any time during the pre-construction or construction periods, one of the following options shall be implemented:

   i. If, prior to project initiation, the U.S. Fish and Wildlife Service (USFWS) approves a mitigation banking or in-lieu fee program to offset impacts to the monarch butterfly, credits shall be purchased or fees paid at an amount/ratio acceptable to the USFWS. Proof of purchase shall be provided to the federal lead agency prior to project completion.

ii. If no mitigation banking or in-lieu fee program is approved by the USFWS prior to project initiation, milkweeds shall be reestablished in the immediate area in the fall or spring following completion of construction. This shall be accomplished by planting seeds or rooted milkweed seedlings. The planted milkweeds shall be of the same species as those removed. Planting shall be conducted at a sufficiently high ratio to ensure success, which is defined as establishing at least one milkweed plant per milkweed plant removed as determined through field monitoring one year after the milkweed planting is undertaken. If the minimum success ratio is not met, milkweed seeding/planting shall continue in successive years until the success criterion is met. Documentation regarding milkweed reestablishment and success shall be provided to the federal lead agency on an annual basis until the success criterion is met.

MM 4.4.3 In order to avoid impacts to nesting migratory birds and/or 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 commence 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 electronically to the California Department of Fish and Wildlife at **R1CEQARedding@wildlife.ca.gov** upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

If active nests are found, the applicant shall consult with CDFW and the USFWS regarding appropriate action to comply with the Migratory Bird Treaty Act and California Fish and Game Code §3503. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

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

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

b. Limiting any import or export of fill material to material that is known to be weed free.

c. Requiring the construction contractor to thoroughly inspect and clean construction equipment prior to entering and upon leaving the job site. All equipment and vehicles shall be washed off-site at a commercial facility when possible. If off-site washing is infeasible, an on-site cleaning station shall be set up at a specified location. Either high-pressure water or air shall be used to clean equipment. The cleaning station shall be located away from sensitive biological resources, and wastewater from the cleaning station shall not be allowed to run off the cleaning station site.

Construction equipment shall be cleaned of dirt and mud that could contain invasive plants, roots, or seeds; tracks, outriggers, tires, and undercarriages shall be carefully washed, with special attention being paid to axles, frames, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Other construction vehicles (e.g., pick-up trucks) that will be frequently entering and exiting the site shall be inspected and washed on an as-needed basis.

MM 4.4.5 To prevent the inadvertent entrapment of wildlife, the construction contractor shall ensure that at the end of each workday trenches and other excavations that are over one foot deep have been backfilled or covered with plywood or other hard material. If backfilling or covering is not feasible, one or more wildlife escape ramps constructed of earth fill or wooden planks shall be installed in the open trench. Pipes shall be inspected for wildlife prior to capping, moving, or placing backfill over the pipes to ensure that animals have not been trapped. If animals have been trapped, they shall be allowed to leave the area unharmed.

CULTURAL

MM 4.5.1 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 City of Mt. Shasta (City) 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 City prior to resuming construction.

MM 4.5.2 In the event that human remains are encountered during construction activities, the City shall comply with §15064.5 (e) (1) of the CEQA Guidelines and PRC §7050.5. All project-related ground disturbance within 50 feet of the find shall be halted until the County coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the NAHC to identify the most likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed in §15064.5 (e) has been completed.

GEOLOGY AND SOILS

MM 4.7.1 Prior to approval of the final improvement plans for the water tanks site, a geotechnical exploration report shall be prepared by a geotechnical engineer or other qualified professional to evaluate the surface and subsurface soil conditions at the water tanks site and identify geotechnical criteria for site excavations, design of foundations, installation of drainage facilities, and other related improvements.

All grading plans and foundation plans for the water tanks shall be reviewed by a qualified professional to ensure that all recommendations included in the geotechnical report are implemented. Applicable notes shall be placed on the attachment sheet to the improvements plans and in applicable project plans and specifications.

If significant engineering design changes occur during construction, the City of Mt. Shasta shall consult with a qualified geotechnical engineer to identify any geotechnical constraints related to the design changes. Recommendations of the geotechnical engineer shall be implemented as warranted.

MM 4.7.2 The City of Mt. Shasta shall ensure through contractual obligations that earthwork activities are monitored by a qualified professional to ensure that recommendations included in the geotechnical report are implemented.

MM 4.7.3 If paleontological resources (fossils) are discovered during construction, all work within a 50-foot radius of the find shall be halted until a professional paleontologist can evaluate the significance of the find. If any find is determined to be significant by the paleontologist, City of Mt. Shasta (City) representatives shall meet with the paleontologist to determine the appropriate course of action. If necessary, a Treatment Plan prepared by a paleontologist outlining recovery of the resource, analysis, and reporting of the find, shall be prepared. The Treatment Plan shall be reviewed and approved by the City prior to resuming construction.

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 hours of 7:00 a.m. and 5:00 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 City's Public Works Director 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 **MM 4.5.1 and 4.5.2.**

SECTION 2.0 CEQA DETERMINATION

On the basis of this initial evaluation:

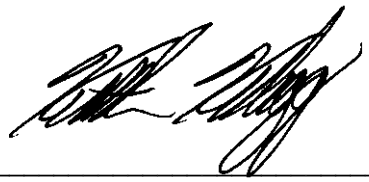
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ **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 (EIR) 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 (EIR) 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.



Ken Kellogg, Director of Public Works
City of Mt. Shasta

August 1, 2025
Date

SECTION 3.0 PROJECT DESCRIPTION

3.1 PROJECT BACKGROUND, NEED, AND OBJECTIVES

The City of Mt. Shasta (City) provides potable water to residents and businesses within the City limits; the City's water service area also encompasses approximately 973 acres of adjacent unincorporated land. In 2010, PACE Engineering, Inc., prepared a Master Water Plan (MWP) that identified existing deficiencies in the water distribution system, future water demands, and recommendations for near-term and long-term improvements.

According to the MWP, the Big Lakes area in the northern area of the City experiences low pressures during summer months. Due to the water system's hydraulic limitations, adequate fire flows cannot be maintained in the northern areas of the distribution system.

As further described below, the MWP identifies a new one-million-gallon (MG) water tank adjacent to Spring Hill, and a new groundwater production well as near-term improvements (2011-2015) that are needed to eliminate existing pressure deficiencies in the Big Lakes area, increase City-wide storage, provide a redundant groundwater production well for emergency supply, and come into compliance with current Waterworks Standards.

Water Storage

Storage facilities must have sufficient capacity to meet both domestic demands and fire flow demands. According to California Code of Regulations (CCR) §64554, a water system that serves more than 1,000 service connections must be able to meet four hours of peak hourly demand (PHD) with source capacity, storage capacity, and/or emergency source connections. Both the maximum daily demand (MDD) and PHD requirements must be met in the system as a whole and in each individual pressure zone.

The need for additional water storage was identified by the City as early as 2010. Although the City has increased storage capacity at the Quail Hill tank site, the MWP identifies the need for a 1 MG storage reservoir adjacent to Spring Hill at a water surface elevation of about 3,800 feet. Rather than constructing one large tank, however, the City has opted to construct two tanks, which would allow one tank to remain in service during maintenance.

Water Supply

The City obtains its normal water supply from Cold Springs, based on a pre-1914 appropriation water right that allows withdrawal of 100 percent of the Cold Springs yield in perpetuity for municipal purposes; the yield is about 2.8 MGD based on a 20-year annual average production (Grant Maxwell, personal conversation, May 8, 2025). Pre-1914 water rights are not subject to the State Water Board permit system because they were established before the California Water Commission was established. Cold Springs is located about two miles east of the City near the eastern end of McCloud Avenue. The springs have an effective capacity of about 1,050 gallons per minute (GPM), or 1.5 million gallons per day (MGD) (Grant Maxwell, personal conversation, May 8, 2025). The City also has an additional supply source from two wells with a combined production capability of 1,200 GPM, or 1.7 MGD. The wells typically operate only in the summer months during periods of high demand.

The MWP states that the addition of a new 900 GMP well in the Big Lakes Area would provide the City with some supply redundancy as well as mitigate the low pressure and fire flow deficiencies in that area. In accordance with the MWP, the City has been considering options for a new water supply well.

Alternatives Considered. In December 2019, the City prepared an Environmental Alternatives Analysis to evaluate five potential well sites (Spring Hill Road North; Spring Hill Road South; Mt. Shasta City Park; Spring Hill Trail; and the Chestnut Street area. The purpose of the study was

to analyze potential environmental impacts associated with installing a new well at these locations.

The report concluded that the proposed well site would have minimal environmental impacts because only minor vegetation removal would occur, and the majority of the associated waterline would be installed in previously disturbed areas. The Alternatives Analysis also identified a potential location for the water tank, which would have extended the waterline across a segment of the Spring Hill Trail and constructed the water tank adjacent to the trail.

It was determined that installing the water tanks in the proposed location would result in less vegetation removal and aesthetic impacts than the location adjacent to the trail.

After the Alternatives Analysis was completed, the City also considered retrofitting an existing production well (DEX-6) for municipal water use. DEX-6 was previously used as a production well for the Dannon bottling facility from January 2001 until some point in 2010, Crystal Geyser (CG) then acquired the well and property in 2013 with the intention of renovating and reopening the bottling facility; however, that project did not move forward, and One Shasta LLC acquired the DEX-6 well and surrounding property in April 2022. Deed restrictions on the property state that "no portion of the property shall be used for the manufacture, assembly, distribution, sale, and/or transportation of water beverage products." The deed identifies the DEX-6 site as being subject to the deed restrictions.

The City has had discussions with One Shasta LLC regarding the transfer of ownership of the DEX-6 Well to the City. However, the City, to date, has been unable to obtain authorization to use DEX-6. If the City acquires DEX-6 prior to installation of the Spring Hill Well, there would be no need to install the Spring Hill Well at this time.

The purpose of the project is to eliminate existing pressure deficiencies in the Big Lakes area, improve fire flows, increase City-wide storage, and provide water supply reliability and resilience.

3.2 PROJECT COMPONENTS / PHYSICAL IMPROVEMENTS

The proposed project includes the following components:

- A new production well would be installed ~275 feet east of Spring Hill Road, generally south of Abrams Lake Road and north of North Mt. Shasta Boulevard. A new well building would be constructed to house the well, pumps and motors, and associated appurtenances.
- A new waterline would be installed from the new well southwest to Spring Hill Road, continuing southeast to North Mt. Shasta Boulevard, then southeast to Ski Village Drive where it would connect to an existing waterline.
- Electric conduit would be installed from the new well, southwest to Spring Hill Road, then north in Spring Hill Road a distance of ~1,900 feet where it would tie in to an existing service.
- Two new water storage tanks would be installed east of Spring Hill, ~1,000 feet north of Ski Village Drive. The tanks would be ~55 feet in diameter. The height of the tanks would be ~24 feet.
- A new waterline would be installed from the new water tank(s), south in an existing dirt road to Ski Village Drive; the new water line would continue west on Ski Village Drive to an existing waterline near North Mt. Shasta Boulevard.
- A new stormdrain pipe would be installed from the water tank(s), south to Ski Village Drive, where it would discharge into an existing drainage ditch.
- Electrical conduit would be installed from the water tank(s) to an existing service ~400 feet southeast of the water tanks site.

As described in Section 3.1 (Project Background, Need, and Objectives), as an alternative to installing a new well, the City explored the possibility of upgrading an existing well (DEX-6) located on privately owned property north of the proposed water tanks site. Although negotiations with the property owner to acquire the well have been unsuccessful, the City has asked that improvements associated with use of the existing well be included in the environmental review in the event that the City is able to acquire the well in the future. If the City is able to acquire DEX-6 for municipal use, the proposed well on Spring Hill Road would not be installed at this time.

Improvements associated with use of the existing DEX-6 well would include installing a waterline from the existing well to the water storage tank(s) and installing the waterline, stormdrain, and electrical conduit from the water tanks as described above.

Other Considerations

Geotechnical Study

Construction activities will be conducted in accordance with the conclusions and recommendations included in a Geotechnical Exploration Report that will be prepared for the water tanks site (see Mitigation Measures 4.7.1 and 4.7.2).

The purpose of the geotechnical study is to evaluate the surface and subsurface soil conditions at the project site and identify geotechnical criteria for site clearing and grading, design of foundations, installation of pavement, drainage facilities, and other related improvements. The study will include site reconnaissance, drilling and logging of exploratory borings, sampling of the subsurface soils, and laboratory testing of the soil samples.

Clearing, Grading, and Erosion Control

To facilitate construction of the water tank improvements, the surface of the area to be graded would be stripped to remove all existing vegetation, trees, tree roots, bushes, and/or other deleterious materials. Any areas where loose or soft soils are encountered will be excavated to undisturbed native ground. Excavated soil materials may be used as engineered fill with the approval of the Soils Engineer, provided that they do not contain debris, excessive organics, or over-sized rocks or boulders. Any existing undesirable items encountered on site that do not meet the requirements for engineered fill would be excavated and removed.

As stated in Section 4.10 (Hydrology and Water Quality) under Question A, the State Water Resources Control Board (SWRCB) Construction General Permit requires implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) to control construction-related erosion and sedimentation. The proposed project is also subject to post-construction requirements included in the SWRCB Construction General Permit to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect impacts from stormwater runoff (i.e., pollution and/or hydromodification) upstream or downstream.

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?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?	☐	☐	☒	☐
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

REGULATORY CONTEXT

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

STATE

California Building Standards Code

The California Building Standards Code (CBSC) (CCR Title 24) is based on the International Building Code used widely throughout the country. Part 11 of the CBSC is the Green Building Code (CALGreen). CALGreen §5.106.8 includes mandatory light pollution reduction measures for non-residential uses. The intent of the measures is to maintain dark skies and to ensure that newly constructed projects reduce the amount of backlight, uplight, and glare (BUG). In addition, §130.2(c) of the California Energy Code (CEC) (CBSC Part 6) requires that all outdoor lighting for new non-residential uses must be controlled with a photocontrol, astronomical time-switch control, or other control capable of automatically shutting off the outdoor lighting when daylight is available, thereby minimizing the potential for glare during the daytime.

In addition, automatic scheduling controls must be installed for all outdoor lighting and must be capable of reducing lighting power by at least 50 percent and no more than 90 percent, and must be separately capable of turning the lighting off during scheduled unoccupied periods.

California Scenic Highway Program

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

LOCAL

City of Mt. Shasta General Plan, Open Space and Conservation Element

The City's General Plan includes the following Goal, Policy, and Implementation Measures (IM) that apply to the proposed project:

City of Mt. Shasta General Plan – Open Space and Conservation Element		
Goal	OC-7	Protect the scenic resources of the Mt. Shasta area.
Policy	OC-7.1	Promote the protection of the scenic beauty of the Mt. Shasta area through appropriate zoning, development standards, and the development review process involving lands in both the City and outside the city limits. The County is encouraged to support and help implement this policy.
IMs	OC-7.1(b)	Establish and enforce standards for new development to protect visible hillsides and ridges. These standards will address screening, design, and setbacks from the tops of ridges.
	OC-7.1(c)	Establish and enforce standards for outdoor lighting to reduce light pollution.

DISCUSSION OF IMPACTS

Questions A and C

Scenic vistas are defined as expansive views of highly valued landscapes from publicly accessible viewpoints (e.g., public roadways, parks and recreation areas, publicly accessible open space areas, and other public gathering places). 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. The City of Mt. Shasta is located in an area considered to have high scenic value. Scenic resources in the study area include Mount Shasta to the east, Black Butte to the north, Spring Hill adjacent to the water tanks site, mountains, trees and other vegetation, open space, and forested hillsides that surround the community.

Pipeline and electrical conduit improvements at the tanks site, Spring Hill Road well site, and within the public road rights-of-way (ROWs) would be subsurface; paved areas would be repaved and other areas would be returned to their existing conditions. Therefore, no long-term visual impacts would occur.

Improvements within the public road ROWs would be visible to individuals living and working in the areas and to travelers on adjacent roadways (see **Photo 4.1-1**).

Short-term visual impacts would occur during construction due to site preparation, trenching, and staging of construction equipment and materials. However, this is a temporary impact that would cease when construction is complete.



Photo 4.1-1. View of Black Butte from the proposed waterline improvements along Spring Hill Road - facing northwest, south of the proposed well site.

Proposed improvements that have the potential to result in long-term visual impacts include the removal of trees and other vegetation on the water tanks site, the proposed two new water storage tanks, and the well building. **Figure 4.1-1** provides an aerial depiction of the improvement sites in relation to the surrounding area.

The proposed well site (**Photo 4.1-2**) is located ~275 feet east of Spring Hill Road on an undeveloped parcel. An existing access road from Spring Hill Road would be utilized to access the well site. Due to the level topography and proximity to Spring Hill Road, the new well building would be visible to travelers along certain areas on Spring Hill Road.

Other features in the built environment surrounding the well site include utility poles, overhead utility lines, and utility boxes (**Photo 4.1-3**). The well building would be a small concrete masonry unit (CMU) building, would be compatible with existing structures in the area, and would not be a prominent visual feature in the viewshed.



Photo 4.1-2. Proposed well site facing southwest toward Spring Hill Road (test well visible on the left side of the photograph).



Photo 4.1-3. Facing northeast from Spring Hill Road toward well site.

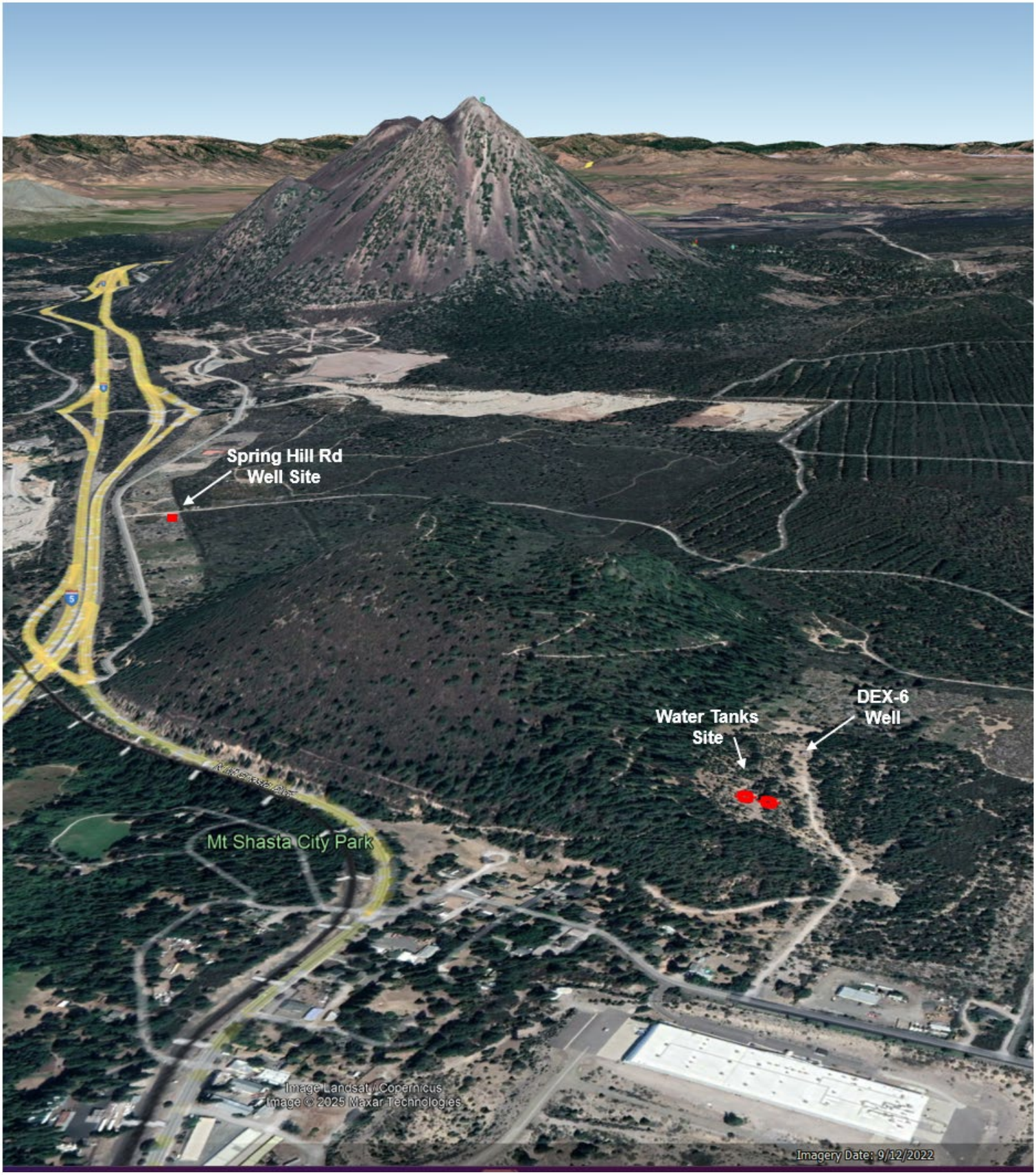


Figure 4.1-1
Aerial View of Project Sites

The proposed site for the two water storage tanks is located generally southeast of Spring Hill and north of Ski Village Drive on a portion of privately-owned property, Siskiyou County Assessor's Parcel Number (APN) 037-070-060, south of the existing DEX-6 well. A partial view of Spring Hill from the DEX-6 well building is shown in **Photo 4.1-4**. The existing private access road from Ski Village Drive would be utilized to access the tank site (**Photos 4.1-5 and 4.1-6**).



Photo 4.1-4. View of Spring Hill from the existing DEX-6 well site facing northwest.



Photo 4.1-5. Access road to water tanks site - facing north from Ski Village Drive, ~1,000 feet southeast of proposed water tanks.



Photo 4.1-6. Access road to water tanks site - facing south toward Ski Village Drive southeast of proposed water tanks.

As shown in **Figure 4.1-1,** the water tanks are sited in an area with less tree coverage to minimize the number of trees that would need to be removed to accommodate the tanks. Although several trees would be removed, dense trees and other vegetation would remain and would screen views of the tanks from the Spring Hill Trail and surrounding area, and from travelers along Ski Village Drive and Raspberry Way. In addition, the tanks would be painted an earth tone to blend with the surrounding area. Trees and structures along Ski Village Drive would also screen views from travelers on Ski Village Drive. **Photos 4.1-7 and 4.1-8** show the proposed tanks site.



Photo 4.1-7. Proposed water tanks site.



Photo 4.1-8. View of Mount Shasta from the proposed tank site facing northeast.

Therefore, because impacts during construction are temporary and would cease at completion of the project, proposed improvements would have limited visibility from public viewpoints, and the proposed water tanks would be painted an earth tone to blend with the surrounding area, impacts would be ***less than significant.***

Question B

According to the California Scenic Highway Mapping System, there are no designated scenic highways in Siskiyou County (Caltrans, 2023). Although the segment of Interstate 5 (I-5) adjacent to the improvements along Spring Hill Road is eligible for scenic highway designation, it is not currently a designated state scenic highway.

The segment of I-5 in the City is identified as a portion of the Volcanic Legacy Scenic Byway All-American Road. A Corridor Management Plan (CMP) was prepared for the Byway by the Volcanic Legacy Community Partnership in 2018 (Volcanic Legacy Community Partnership, 2018). Although the CMP includes recommended scenic guidelines for communities and landscapes along or near the Volcanic Legacy Scenic Byway, the measures are not mandatory and have not been adopted by the City.

As documented under Question A, due to intervening topography, vegetation, and existing structures, the new water tanks and well building would not be prominently visible to travelers along roadways in the area. Therefore, there would be ***no impact***.

Question D

The proposed project would include the installation of security lighting at the water tanks site and Spring Hill Road well building. New permanent lighting must comply with CALGreen light pollution reduction measures for non-residential uses as described under Regulatory Context. The intent of the measures is to maintain dark skies and to ensure that newly constructed projects reduce the amount of backlight, uplight, and glare (BUG). Additionally, the City's Design Guidelines also require that lighting be adequately shielded from adjacent properties and be designed to minimize unnecessary lighting.

As discussed in Section 4.13 (Noise), construction hours are limited to between 7:00 A.M. and 5:00 P.M., Monday through Saturday and construction lighting would be needed only a couple of hours a day at certain times of the year. Therefore, construction lighting is not expected to significantly impact motorists or nearby residents.

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

CUMULATIVE IMPACTS

Potential cumulative projects in the area include growth according to the build-out projections in the City's and County's General Plans. As documented above, the proposed project does not include any features that would have an adverse effect on a scenic vista or substantially degrade the existing visual character or quality of public views of the site and its surroundings.

Project-related lighting would include new security lighting at the new tanks site and Spring Hill Road well site. Exterior lighting installed at the new facilities would comply with CALGreen light pollution reduction requirements and the City's lighting standards. In addition, new development projects are subject to the City's Design Guidelines that ensure new development is compatible with its surroundings and consistent with the City's aesthetic vision for the community. The project's contribution to cumulative impacts would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Transportation (Caltrans). 2023. California Road System – Functional Classification. https://www.arcgis.com/apps/webappviewer/index.html?id=026e830c914c495797c969a3e5668538. Accessed January 2025.

City of Mt. Shasta. 2007. City of Mt. Shasta General Plan, Open Space and Conservation Element. https://www.mtshastaca.gov/planning-department/page/current-planning-projects. Accessed January 2025.

Volcanic Legacy Community Partnership. 2018. Volcanic Legacy Scenic Byway All-American Road Corridor Management Plan Update for Oregon and California. https://www.oregon.gov/ODOT/Programs/TDD%20Documents/Volcanic-Legacy-Crater-Lake_Management-Plan.pdf. Accessed April 2025.

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?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

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 assist decision makers 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

City of Mt. Shasta General Plan, Open Space and Conservation Element

The City's General Plan includes the following Goals and Policies that apply to the proposed project:

City of Mt. Shasta General Plan – Open Space and Conservation Element		
Goals	OC-4	Encourage and conserve lands for agricultural purposes.
	OC-5	Encourage and conserve lands for timber purposes.
Policies	OC 4.1	Allow agricultural production lands to remain available for agriculture and rural uses.
	OC 5.1	Allow timber production lands to remain available for the harvest and replanting of timber resources, as well as rural and recreation uses.

DISCUSSION OF IMPACTS

Questions A, B, and D

According to the *Important Farmland in California* map published by the FMMP, neither the project sites nor surrounding properties are designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; however, the Spring Hill Road well site, proposed water tanks site, and existing DEX-6 well site are designated as Farmland of Local Importance (DOC, 2020).

In Siskiyou County, Farmland of Local Importance includes dryland, or sub-irrigated hay and grain, and improved pasture forage species; farmlands presently irrigated but which do not meet the soil characteristics of Prime Farmland or Farmland of Statewide Importance; and areas currently shown as prime agricultural land in the Siskiyou County General Plan.

The property is not identified as prime agricultural land in the Siskiyou County General Plan (Siskiyou County, 1973). The City's General Plan Map identifies the water tanks site as being with the City's Planning Area and designates the property for low-density residential uses (City of Mt. Shasta, 2007). Further, aerial imagery from 1985 through 2025 was reviewed and shows that the properties have not historically been used for agricultural purposes.

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service, the soil types mapped for the proposed sites for permanent structures are Deetz gravelly loamy sand, 0 to 5 percent slopes and Deetz gravelly loamy sand, 5 to 15 percent slopes (USDA, 2024). Neither soil type is considered Prime Farmland, and the properties are not irrigated. Further, no properties in the project area are subject to a Williamson Act contract (DOC, 2023).

Because the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, does not meet the definition of Farmland of Local Importance, would not conflict with a Williamson Act contract, and does not include any components that would have a direct or indirect effect on farmland, there would be ***no impact***.

Question C

According to the City's and County's Zoning Maps, the project sites and surrounding areas are not designated as timberland and are not zoned for timberland production. Therefore, the proposed project would not conflict with existing zoning for, or cause rezoning of, timberland or forest land.

As stated under Regulatory Context, "timberland" is defined in PRC §4526 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."*

According to the California Department of Forestry and Fire Protection (CAL FIRE) 2024 Forest Practice Rules (CAL FIRE, 2024), in Siskiyou County (CAL FIRE Northern Forest District), commercial timber species include the following "Group A" species: sugar pine, coast redwood, ponderosa pine, Jeffrey pine, western white pine, lodgepole pine, white fir, California red fir, noble fir, Douglas-fir, incense cedar, and Port Orford cedar. In addition, the following "Group B" species may be considered commercial species if they are found on lands where the Group A species are growing naturally, or have grown naturally in the past: knobcone pine, gray pine, California black oak, Oregon white oak, tanoak, mountain hemlock, Brewer spruce, Englemann spruce, Sierra redwood, golden chinkapin, foxtail pine, white alder, Monterey pine, Pacific madrone, California laurel, and western juniper. Tree species in the project site include sugar pine, ponderosa pine, gray pine, and Douglas-fir, which meet the definition of "timberland".

As stated under Regulatory Context above, "forest land" is defined in PRC §12220(g) as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

The majority of the water tanks site is forested and meets the definition of forest land as described above. Construction of the two new water tanks and associated appurtenances would result in the conversion of ~0.75 acres of timberland and forest land to non-forest use.

As such, construction of the aforementioned improvements is subject to the California Forest Practices Rules (CAL FIRE, 2024) including the requirement to obtain a Conversion Exemption or a Timberland Conversion Permit (TCP) and approval of a Timber Harvest Plan (THP) by CAL FIRE prior to earth disturbance in this area. An applicable conversion exemption may be a "Less Than 3 Acre Conversion Exemption" or a "Utility Conversion" depending on the extent of tree removal and the discretion of CAL FIRE. If the proposed project is not exempt, the City may need to prepare a THP and obtain a TCP.

According to the Draft Siskiyou County 2050 General Plan Update Background Report, the County has over 2.5 million acres of forest land, totaling over 60 percent of the County's total land area (Siskiyou County, 2024). The proposed conversion of up to ~0.75 acres of land represents a very small percentage of forest land in the County. Therefore, the project's impact on timberland and forest land would be considered ***less than significant***.

CUMULATIVE IMPACTS

As documented above, the proposed project would not impact agricultural resources; therefore, the proposed project would not contribute to adverse cumulative impacts to agricultural resources. Project implementation would result in the conversion of timberland and forest land on the project site. However, the conversion represents a small percentage of land in the County that is considered commercial forest land. Further, tree removal would be subject to the requirements of CAL FIRE. Therefore, cumulative impacts of the proposed project on timberland and forest land would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

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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?	☐	☐	☒	☐
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)?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

REGULATORY CONTEXT

FEDERAL

Federal Ambient Air Quality Standards

The U.S. Environmental Protection Agency (USEPA), under the federal Clean Air Act (CAA), establishes maximum ambient concentrations for criteria air pollutants (CAPs), known as the National Ambient Air Quality Standards (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 (O_3)	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.	• 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.

Pollutant	Characteristics	Primary Effects	Major Sources
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.	• 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 (NO_2)	Nitrogen dioxide is a reddish-brown gas formed when nitrogen (N_2) combines with oxygen (O_2). Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere and is related to traffic density.	• 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 (SO_2)	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.	• 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 PM_{10})	Particulate matter is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols that are small enough to remain suspended in the air for a long period of time. Particulate matter with a diameter of 10 microns or less (PM_{10}) is inhalable into the lungs and can induce adverse health effects. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter ($PM_{2.5}$). Therefore, $PM_{2.5}$ comprises a portion of PM_{10}.	• Premature death. • Hospitalization for worsening of cardiovascular disease. • Hospitalization for respiratory disease • Asthma-related emergency room visits. • Increased symptoms, increased inhaler usage	Dust- and fume-producing construction activities, power plants, steel mills, chemical plants, unpaved roads and parking lots, woodburning stoves and fireplaces, wildfires, motor vehicles, and other combustion sources. Also a result of photochemical processes.

Pollutant	Characteristics	Primary Effects	Major Sources
Lead (Pb)	A heavy metal that occurs both naturally in the environment and in manufactured products.	• Impaired mental functioning in children • Learning disabilities in children • Brain and kidney damage. • Reproductive disorders. • Osteoporosis.	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.

Source: U.S. Environmental Protection Agency (USEPA, 2024)

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 (California Air Resources Board [CARB], n.d.a). 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 (CAAQSs). 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, CARB works with local air districts to develop and implement attainment plans to obtain compliance with both federal and State air quality standards.

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

Sulfate (SO_4). Sulfate is oxidized to sulfur dioxide (SO_2) during the combustion process and is subsequently converted to sulfate compounds in the atmosphere. Major sources include industrial processes and the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. Primary effects include respiratory symptoms, worsening of cardiovascular disease, damage to a variety of materials, including marble, iron, and steel, damage to crops and natural vegetation, and visibility impairment.

Hydrogen Sulfide (H_2S). Hydrogen sulfide is a colorless gas with the odor of rotten eggs. Major sources include geothermal power plants, petroleum refineries, and wastewater treatment plants. Primary effects include eye irritation, headache, nausea, and nuisance odors.

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

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

TABLE 4.3-2
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards Primary	National Standards Secondary
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	-	Same as Primary Standard
	8 Hour	0.07 ppm (137 µg/m^3)	0.07 ppm (137 µg/m^3)	

Pollutant	Averaging Time	California Standards	National Standards Primary	National Standards Secondary
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m^3	-	
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	-	35 µg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m^3	9.0 µg/m^3	15.0 µg/m^3
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	-
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 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)	53 ppb (100 µg/m^3)	Same as Primary Standard
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	-
	3 Hour	-	-	0.5 ppb (1300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas)	-
	Annual Arithmetic Mean	-	0.030 ppm (for certain areas)	-
Lead	30 Day Average	1.5 µg/m^3	-	-
	Calendar Quarter	-	1.5 µg/m^3 (for certain areas)	Same as Primary Standard
	Rolling 30-Month Average	-	0.15 µg/m^3	
Visibility Reducing Particulates	8 Hour	Extinction of 0.23 per kilometer	No National Standards	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)		

Source: CARB, 2024. Notes: mg/m^3=milligrams per cubic meter; ppm=parts per million; ppb=parts per billion; µg/m^3=micrograms per cubic meter

Toxic Air Contaminants

The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Assembly Bill 2588) was adopted in response to public concern regarding potential adverse health effects associated with emissions of toxic air contaminants (TACs) (CARB, n.d.b). TACs are regulated under the California CAA. A "hot spot" is an area where air toxics levels are higher than in the overall region, which may be caused by emissions from a specific facility. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), grading and demolition of structures (asbestos), and diesel-motor vehicle exhaust. Facilities found to release high volumes of TACs are required to conduct a detailed health risk assessment that estimates emission impacts to the neighboring community and recommends mitigation to minimize TACs (CARB, n.d.c).

In-Use Off-Road Diesel-Fueled Fleets Regulation

CARB adopted the In-Use Off-Road Diesel-Fueled Fleets Regulation to reduce NO_X, diesel particulate matter, and other criteria pollutant emissions from various vehicles subject to the regulation. The regulation covers a wide range of vehicle types, including, but not limited to, vehicles used in construction, mining, industrial operations, and other industries. The regulations were most recently updated in August 2023 and became effective on October 1, 2023 (CARB, 2023).

The regulations require fleets to phase-out use of the oldest and highest polluting off-road diesel vehicles in California earlier or beyond what was required of fleets in the previous Off-Road Regulation. The

amended regulations will be phased in starting in 2024 through the end of 2036. Beginning January 1, 2024, the updated regulations also require the use of renewable diesel (99 or 100 percent renewable) in all vehicles that are subject to the regulation, subject to certain exemptions.

The amended regulations require that beginning January 1, 2024, public agencies that award or enter into contracts for public works projects obtain fleet Certificates of Reported Compliance from fleets prior to awarding public works contracts. These requirements will ensure that only compliant fleets are being used on public works projects. CARB estimates that from 2024 through 2038, the amendments will generate an additional reduction above and beyond the previous regulation of approximately 31,087 tons of NO_X and 2,717 tons of $PM_{2.5}$ (CARB, 2022). About half of those additional reductions are expected to be realized within the first five years of implementation.

Mobile Source Strategy

CARB's 2020 Mobile Source Strategy (Strategy) identifies the levels of cleaner and zero-emission technologies that are necessary to meet the State's reduction goals for criteria pollutants, greenhouse gas emissions, and toxic air contaminants from mobile sources (CARB, 2021). The Strategy provides data to support the development of other planning documents, including the State Implementation Plan, the Climate Change Scoping Plan Update, and the Community Emissions Reduction Plans required for communities selected as a part of CARB's Community Air Protection Program.

LOCAL

Siskiyou County Air Pollution Control District (SCAPCD)

The SCAPCD is the regional agency charged with the responsibility of enforcing federal and State air quality regulations in Siskiyou County. The SCAPCD also issues rules and regulations setting specific standards of operation, defining permit requirements, and setting emission limits. For new or modified stationary sources, the SCAPCD has defined 250 pounds per day (lbs/day) as the threshold of significance for NO_X, $PM_{2.5}$, PM_{10}, and SO_2 emissions, and 2,500 lbs/day as the threshold of significance for CO emissions (Rule 6.1).

Siskiyou County is currently designated in attainment or unclassified status for all federal and state criteria pollutants; therefore, the County is not required to have a local air quality attainment plan (CARB, 2023).

City of Mt. Shasta General Plan, Open Space and Conservation Element

The City's General Plan includes the following Goal and Policy that apply to the proposed project:

City of Mt. Shasta General Plan– Open Space and Conservation Element		
Goal	OC-11	Strive to maintain clean air in the planning area.
Policy	OC-11.1	Work with the County to maintain attainment status in the planning area.

DISCUSSION OF IMPACTS

Questions A and B

As discussed above, Siskiyou County is currently in attainment or unclassified status for all federal and State criteria pollutants and therefore is not required to have a local air quality attainment plan. Nonetheless, the SCAPCD implements rules and regulations regarding air emissions, and monitors compliance with such rules and regulations. As documented below, emissions modeling was conducted to ensure compliance with these rules and regulations.

Construction Emissions

Project emissions were estimated using Version 2022.1.1.29 of the California Emissions Estimator Model (CalEEMod). CalEEMod provides default values when site-specific inputs are

not available. CalEEMod does not directly calculate ozone (O_3) emissions. Instead, emissions associated with ozone precursors, (ROG and NO_X), are calculated. For the proposed project, site-specific inputs and assumptions include, but are not limited to, the following:

- Emissions from construction are based on all construction-related activities associated with the proposed uses, including but not limited to grading, site preparation, use of construction equipment, material hauling, trenching, site preparation, application of architectural coatings, and paving.
- For purposes of the CalEEMod Analysis, it was assumed construction would start in May 2027 and occur over a period of approximately 24 months.
- Total land disturbance would be approximately 1.9 acres; 50 cubic yards (CY) of material would be imported; 1,700 CY would be exported.
- The total area to be paved would be 0.4 acres.
- The total weight of demolition debris (pavement) to be removed from the project site would be approximately 320 tons.
- The total area receiving architectural coatings would be 31,940 square feet.
- To represent a worst-case scenario, it was assumed that approximately 90 trees with a diameter of 6 inches at breast height (DBH) and larger would be removed to facilitate construction at the water tanks site.

Output files, including all site-specific inputs and assumptions, are provided in **Appendix A**. The proposed project would result in the temporary generation of ROG, NO_x, PM_{10}, and other regulated pollutants during construction. ROG and NO_x emissions are associated with employee vehicle trips, delivery of materials, and construction equipment exhaust. PM_{10} would be generated during site preparation, excavation, paving, and from exhaust associated with construction equipment.

Although the City and SCAPCD have not adopted specific thresholds for construction-related emissions, current SCAPCD rules, including Rule 6.1 (Construction Permit Standards for Criteria Pollutants), include thresholds for new and modified stationary sources. The City has determined that it would be appropriate to use these significance thresholds for construction-related emissions as well. **Table 4.3-3**, shows the highest daily levels of project construction emissions regardless of construction phase.

TABLE 4.3-3
Estimated Construction Emissions (Maximum Pounds per Day)

Construction Year	Pollutants of Concern (lbs/day)					
	ROG	NOx	PM_{10}	$PM_{2.5}$	CO	SO_2
2027	1.43	12.8	3.53	1.90	15.1	0.03
2028	1.09	9.27	0.31	0.27	11.8	0.02
2029	12.4	8.92	0.32	0.25	11.7	0.02
SCAPCD Threshold	250	250	250	250	2,500	250

Source: CalEEMod, 2025.

As shown in **Table 4.3-3**, construction of the proposed project would not exceed the SCAPCD's thresholds.

Operational Emissions

Operation of the project would generate criteria pollutants from area sources (e.g., cleaning supplies, maintenance activities such as painting, etc.) and mobile sources (e.g., vehicle trips for employees, deliveries, etc.), as well as indirect emissions associated with energy use (operation of the new well water storage tank, etc.). Vehicle traffic on graveled surfaces would also generate $PM_{2.5}$ and PM_{10} emissions.

The primary contributor of stationary source emissions would be the emergency back-up generator at the well site; however, the generator would be operated only for limited times during monthly testing, and during prolonged power outages. **Table 4.3-4** shows estimated operational emissions for the proposed project.

TABLE 4.3-4
Estimated Operational Emissions (Maximum Pounds per Day)

Pollutants of Concern (lbs/day)						
Source	**ROG**	**NOx**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**
Mobile	0.11	0.10	0.12	0.03	0.64	<0.005
Area	0.26	<0.005	<0.005	<0.005	0.22	<0.005
Energy	<0.005	0.06	<0.005	<0.005	0.05	<0.005
Stationary	0.05	0.16	0.01	0.01	0.18	<0.005
Vegetation	0	<0.005	0.01	<0.005	-	<0.005
Total	**0.42**	**0.32**	**0.14**	**0.05**	**1.09**	**<0.005**

Source: CalEEMod, 2025. Note: Totals may not add due to rounding.

The project does not include any other components that would increase long-term operational emissions above existing conditions. The proposed project would not exceed the SCAPCD thresholds. Therefore, operational impacts would be less than significant.

For both construction and operational emissions, the proposed project would not result in significant impacts associated with ozone (O_3), lead (Pb), hydrogen sulfide (H_2S), 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, the potential for lead emissions is less than significant.

Hydrogen Sulfide. Hydrogen sulfide is a colorless gas with the odor of rotten eggs. The most common sources of hydrogen sulfide emissions are oil and natural gas extraction and processing, and natural emissions from geothermal fields. It is also formed during bacterial decomposition of human and animal wastes, and is present in emissions from sewage treatment facilities and landfills. The project does not include any components that would generate hydrogen sulfide emissions.

Vinyl Chloride. Vinyl chloride is used to manufacture polyvinyl chloride (PVC) plastic and other vinyl products. Additionally, vinyl chloride is produced during the microbial breakdown of chlorinated solvents (e.g., engine cleaner, degreasing agent, adhesive solvents, paint removers, etc.). The 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 increased use 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.

For the proposed project, visibility-reducing pollutants (e.g., $PM_{2.5}$ and PM_{10}), would be generated only during construction activities. Because only relatively small amounts of particulates would be generated, and **MM 4.3.1** would be implemented to minimize emissions during construction, potential impacts with respect to visibility-reducing pollutants are less than significant.

As discussed under Regulatory Context above, Siskiyou County is designated as an attainment or unclassified area for all federal and State ambient air quality standards and there are no applicable local or regional air quality attainment plans that apply to the proposed project. Further, the project would not exceed SCAPCD thresholds during construction or operation and would not result in significant impacts associated with O_3, Pb, H_2S, vinyl chloride, or visibility-reducing particles. Therefore, impacts would be ***less than significant***.

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. Sensitive receptors in the project area are limited to nearby residents.

The proposed project does not have any components that would result in significant long-term operational emissions. However, PM_{10} and other pollutants would be generated during construction.

Construction associated with the new water tanks and utility extensions on the water tanks site would occur ~675 feet from the nearest residences to the east adjacent to Raspberry Way, and to the south, north of Ski Village Drive; due to the distance, it is not expected that these residents would be impacted by emissions during construction.

Construction associated with installation of the waterline in Ski Village Drive would occur as close as ten feet from the nearest residence, a multi-family dwelling at the western extent of improvements on Ski Village Drive. The remainder of the residences along Ski Village Drive are a minimum of ~25 feet from the roadway. Although emissions would cease with completion of construction work, sensitive receptors adjacent to the construction areas could be exposed to elevated dust levels and other pollutants on a short-term basis. **MM 4.3.1** is included to minimize temporary impacts on sensitive receptors.

Compliance with federal, state, and local regulations, and implementation of **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 diesel equipment, paints, 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

Past, present, and future development projects contribute to a region's air quality conditions on a cumulative basis; therefore, by its very nature, air pollution is largely a cumulative impact. If a project's

individual emissions contribute toward exceedance of the NAAQSs or the CAAQSs, 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.

As noted above, Siskiyou County is designated as an attainment or unclassified area for all federal and State criteria pollutants. Implementation of the proposed project combined with future development within the project area could lead to cumulative impacts to air quality. However, all projects in Siskiyou County are subject to applicable CARB and SCAPCD rules and regulations, including mitigation measures that address impacts during construction.

Further, all development is subject to SCAPCD regulations for new or modified stationary sources and thresholds of significance for CO, NO_X, $PM_{2.5}$, PM_{10}, and SO_2 emissions (Rule 6.1). These thresholds were adopted to minimize cumulative impacts to air quality. Implementation of **MM 4.3.1** and compliance with the regulations identified under Regulatory Context ensures that the proposed project would have a less-than-significant cumulative impact on local and regional air quality.

MITIGATION

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, preferably in the mid-morning and after work is completed each day, with care given to work sites with bare soil.

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 surfaces.

e. All land clearing, grading, earth moving, and excavation activities on the project site shall be suspended when winds are causing excessive dust generation.

f. All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least two feet of free board in accordance with the requirements of Section 23114 of the California Vehicle Code.

g. Paved streets in and adjacent to active construction sites shall be swept or washed at the end of the day (or more frequently if needed) to remove excessive accumulations of silt and/or mud resulting from activities on the development site.

h. When not in use, motorized construction equipment shall not be left idling for more than five minutes.

DOCUMENTATION

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U.S. Environmental Protection Agency (USEPA). 2024. Criteria Air Pollutants. https://www.epa.gov/criteria-air-pollutants. Accessed January 2025.

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?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

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 (NWPs) authorize a wide variety of minor activities that have minimal effects. Projects that are not covered under a regional general permit and do not qualify for a NWP are required to obtain a standard permit (e.g., individual permit or letter of permission).

Section 401

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

Federal Endangered Species Act

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

Federal Migratory Bird Treaty Act

Under the Migratory Bird Treaty Act (MBTA) of 1918, as amended, migratory bird species listed in 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. California Department of Fish and Wildlife (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 (SB 1334, 2004)

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

LOCAL

City of Mt. Shasta General Plan, Open Space and Conservation Element

The City's General Plan includes the following Goals, Policies, and Implementation Measure (IM) that apply to the proposed project:

City of Mt. Shasta General Plan – Open Space and Conservation Element		
Goals	OC-1	Conserve lands that support important fisheries, wildlife and botanical habitat, and wetlands.
	OC-2	Protect riparian habitat along streams in the Planning Area.
	OC-3	Conserve wetland areas.
Policies	OC-1.1	Limit development on lands that provide important fisheries, wildlife and botanical habitat, and wetlands to agriculture and rural density residential.
	OC-2.1	Require erosion control protection as a part of grading and development plans.
	OC-3.1	Work to satisfy state and national wetlands policy.
IM	OC-1.3(b)	Consider the Theiss 1990 wetland report and the documented identification of the California Department of Fish and Game's deer wintering and fawning grounds as initial steps in identifying important fishery, wildlife and botanical, and wetland habitats in the planning area. Recognize and reference new, credible information as it becomes available.

DISCUSSION OF IMPACTS

Question A

The evaluation of potential impacts on special-status species and sensitive natural communities entailed records searches and field evaluations conducted by ENPLAN as discussed below. **Appendix B** includes the following:

- California Natural Diversity Database (CNDDB) Query Summary (CDFW, 2025a)
- California Native Plant Society (CNPS) Query Summary (CNPS, 2025)
- U.S. Fish and Wildlife Service List of Threatened and Endangered Species and Critical Habitats (USFWS, 2024, 2025)
- 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 surveys

The records search included a review of CNDDB records for special-status plants and wildlife (CDFW, 2025a); CNPS records for special-status plant species (CNPS, 2025); federal records for listed, proposed, and candidate plant and wildlife species under jurisdiction of the USFWS; and critical habitat data maintained by the USFWS (USFWS, 2024, 2025).

To determine the presence/absence of special-status plant and wildlife species in the study area, an ENPLAN biologist conducted botanical and wildlife surveys on May 3, May 23, and July 21, 2023, and August 27, 2024. 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. The potential for each special-status species to occur in the project site is evaluated in **Appendix B**.

Special-Status Plant Species

Review of the USFWS species list for the project area identified no federally listed plant species as potentially being present in the project area (USFWS, 2025).

Review of CNDDB records (CDFW, 2025a) showed that one special status plant, rosy orthocarpus (California Rare Plant Rank [CRPR] 2B.1), has been broadly mapped in the northwestern project area; however, the only prior report is from 1903 and the species was not observed in the project area during the current botanical surveys.

The following special-status plant species have been reported within a five-mile radius of the project area: Aleppo avens (CRPR 2B.2), broad-nerved hump moss (CRPR 2B.2), Gasquet rose (CRPR 1B.3), marsh skullcap (CRPR 2B.2), northern adder's tongue (CRPR 2B.2), Oregon fireweed (CRPR 1B.2), pallid bird's-beak (CRPR 1B.2), rattlesnake fern (CRPR 2B.2), Shasta chaenactis (CRPR 1B.3), Siskiyou clover (CRPR 1B.1), snow fleabane daisy (CRPR 2B.3), subalpine aster (CRPR 2B.3), Trinity buckwheat (CRPR 1B.2, State Endangered [SE]), woodnymph (CRPR 2B.2), and woolly balsamroot (CRPR 1B.2). In addition, the following non-status plants have been reported within a five-mile radius of the project site: Baker's globe mallow, Pacific fuzzwort, and three-ranked hump moss (CDFW, 2025a).

The CNPS Inventory identified no additional special-status plants within the U.S. Geologic Survey's (USGS) City of Mount Shasta 7.5-minute quadrangle. The following additional non-status plants have been reported in this quadrangle: California lady's-slipper, California pitcherplant, clustered lady's-slipper, marsh claytonia, rough harebell, and slender cottongrass (CNPS, 2025).

The potential for each special-status plant species to occur in the project site is evaluated in **Table 3** (Potential for Federal and State Special-Status Species to Occur on the Project Site) in **Appendix B**. As documented above and in **Table 3**, 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 Wildlife Species

Review of the USFWS species list for the project area identified the following federally listed wildlife species as potentially being present in the project area: California condor (Experimental Population, Non Essential [EPNE], SE, State Fully Protected [SFP]) conservancy fairy shrimp (Federally Endangered [FE]), Franklin's bumble bee (FE, State Candidate Endangered [SCE]), gray wolf (FE, SE), monarch butterfly (Federally Proposed Threatened [FPT]), North American wolverine (Federally Threatened [FT], SFP, State Threatened [ST]), northern spotted owl (FT, ST), northwestern pond turtle (FPT), vernal pool fairy shrimp (FT), vernal pool tadpole shrimp (FE), and western yellow-billed cuckoo (FT, SE) (USFWS, 2025).

Review of the CNDDB records showed that no special-status wildlife species have been reported within the project area. The following special-status wildlife species have been reported within a five-mile radius of the project area: American goshawk (State Species of Special Concern [SSSC]), bald eagle (Federally Delisted [FD], SE, SFP), bank swallow (ST), Cascades frog (SCE, SSSC), fisher (SSSC), foothill yellow-legged frog – North Coast Distinct Population Segment (DPS) (SSSC), Franklin's bumble bee (FE, SCE), Sierra Nevada red fox – southern Cascades DPS (ST), spotted bat (SSSC), Suckley's cuckoo bumble bee (Federally Proposed Endangered [FPE], SCE), western bumble bee (SCE), western mastiff bat (SSSC), western yellow-billed cuckoo (FT, SE), and yellow rail (SSSC).

The following non-status wildlife species have also been reported within a five-mile radius of the project area: gray-headed pika, great blue heron, long-eared myotis, North American porcupine, obscure bumble bee, osprey (State Watchlist [WL]), Pacific marten, and silver-haired bat (CDFW, 2025a).

The potential for each special-status species to occur in the project site is evaluated in **Table 3** (Potential for Federal and State Special-Status Species to Occur on the Project Site) in **Appendix B**. While no special-status wildlife species were observed during the field surveys, the study area has the potential to support special-status bat species (spotted bat and western mastiff bat), monarch butterfly, and special-status bee species (western bumble bee and Suckley's cuckoo bumble bee). These species are further addressed below:

Special-Status Bats

Although no bats were observed in the project site during the wildlife survey, manmade structures and trees on the water tanks site have a moderate potential to be utilized for roosting by spotted bats (*Euderma maculatum*, SSSC), western mastiff bats (*Eumops perotis californicus*, SSSC), or other bat species. Direct effects could include mortality resulting from the removal of a tree containing a roosting bat or colony. Indirect effects may include the abandonment of maternity colonies in response to construction noise.

Potential impacts to special-status bat species can be avoided by conducting construction outside of the maternal roosting period for spotted bat and Western mastiff bat (April 1 through July 31) as described in **MM 4.4.1**. Additionally, **MM 4.4.1** provides a two-step tree removal process to be used during construction periods that will allow bats to leave their daytime roosting sites before tree removal is conducted. With implementation of **MM 4.4.1**, potential impacts to special-status bat species will be reduced to less than significant.

Monarch Butterfly (*Danaus plexippus* pop.1), FPT

In December of 2024, the USFWS announced a proposed rule to list the monarch butterfly as threatened under the FESA, including a 4(d) rule, in order to offer federal protections to the species. In the 4(d) rule, the USFWS identifies the need to increase the availability of milkweed and nectar plants, to protect and enhance overwintering habitat, to reduce the negative impacts of pesticides, and to maintain public support for monarch conservation.

Monarch butterflies are reliant on milkweed species for development and survival. Eggs are laid solely on milkweed plants within their summer breeding range. As shown in **Figure 4.4-1**, during the botanical field survey conducted by ENPLAN, numerous showy milkweeds (*Asclepias speciosa*) were observed adjacent to Spring Hill Road where waterline and electrical conduit improvements are proposed.

Monarch butterflies may rely on the milkweeds for breeding during their summer migration window. Areas adjacent to the project site also contain other floral resources that could be used as a food source by monarchs. If removal of milkweeds is required during construction, monarch butterflies could be adversely affected.

If the western migratory population of the monarch butterfly remains formally designated as proposed, or is listed as threatened or endangered at the time of construction, then **MM 4.4.2** shall be implemented.

Special-Status Bumble Bees

Western Bumble Bee (*Bombus occidentalis*, SCE)
Western Bumble Bees are found in meadows and grasslands with abundant floral resources. In California, the species is largely confined to high-elevation sites in the Sierra Nevada and scattered sites on the coast. The flight period is generally from early February to late November. Nests are primarily in underground cavities on open west-southwest slopes bordered by trees, although a few aboveground nests have been reported. Very little is known about overwintering sites; however, the species has been reported in overwintering sites that were two inches deep in a "steep west slope of the mound of earth." The entirety of Siskiyou County is within the historic range for the species (CDFW, 2025b).

CNNDB records show that the species was reported in 1939 in the general vicinity of Ney Springs, south of Lake Siskiyou. CNDDB also shows that the species was collected in the general area of Mt. Shasta in 1918, 1952, 1958, and 1960; however, the exact locations are unknown. iNaturalist identifies one reported occurrence of western bumble bee within five miles of the study area; the species was observed in August 2022 near the southwest bank of Lake Siskiyou, ~3 miles southwest of the study area (iNaturalist, 2022).

Bumble Bee Watch indicates that five western bumble bees were observed on July 17, 2024, adjacent to Everitt Memorial Highway, ~4 miles east of the project area (Xerces, 2024).

Suckley's Cuckoo Bumble Bee (*Bombus suckleyi*, FPE, SCE)
Suckley's cuckoo bumble bees are known to range from the western limits of the Klamath Mountains to Bear Mountain (approximately 26 miles east of Mount Shasta). The species is a social parasite that has only been documented to reproduce successfully in colonies of western bumble bees. Females emerge in late May, forage primarily on species of composites, and search for a suitable host bumble bee nest to expropriate. Very little is known about overwintering sites utilized by the species, although bumble bee females generally overwinter in soft, disturbed soil or under leaf litter or other debris. The range for Suckley's cuckoo bumble bee overlaps the project area (CDFW, 2025c).

CNDDB records show three reported occurrences of Suckley's cuckoo bumble bee in California. One of these observations was in 1958 in the general area of the City of Mt. Shasta; however, the exact location is unknown. Neither iNaturalist nor Bumble Bee Watch include reported sightings of Suckley's cuckoo bumble bees in California.

Although scattered floral resources are located adjacent to the waterline and electric conduit corridor along Spring Hill Road, North Mt. Shasta Boulevard, and Ski Village Drive, there are very few flowering plants on the water tank site or in the Spring Hill Road well site. Installation of utility infrastructure would occur in road rights-of-way and public utility easements in previously disturbed areas, and no significant floral resources would need to be removed to accommodate the improvements. Therefore, it is not expected that special-status bumble bees would be present or be affected by project implementation.



Path: N:\companyfiles\01-Jobs Active\032-54 PACE - Mt. Shasta Spring Hill Water Tank\3-Project GIS\3-Map Documents\Map Sessions\32-54 Mt. Shasta Spring Hill Ehub\32-54 Mt. Shasta Spring Hill Ehub.aprx

All depictions are approximate. Not a survey product. 05.08.25

0 150 Feet

Figure 4.4-1

Observed Milkweed Locations

ENPLAN

Birds of Conservation Concern

The USFWS identified the following Birds of Conservation Concern as potentially being present in the project area: California gull, Cassin's finch, chestnut-backed chickadee, Clark's grebe, evening grosbeak, oak titmouse, olive-sided flycatcher, rufous hummingbird, western grebe, western screech owl, and wrentit. The bald eagle and golden eagle are not listed as Birds of Conservation Concern, but the USFWS noted that they are birds that warrant attention because they are protected under the Bald and Golden Eagle Protection Act (USWFS, 2025).

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, particularly those involving tree removal, 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 **MM 4.4.3**, 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, the City 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.

Potential Introduction and Spread of Noxious Weeds

The introduction and spread of noxious weeds during construction activities has the potential to adversely affect habitats that may support sensitive species. Each noxious weed identified by the California Department of Food and Agriculture (CDFA) 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. Four CDFA-ranked weeds were observed in the study area during the botanical surveys: giant ragweed, Klamath weed, tree-of-heaven, and downy brome.

A broader view of invasive plants is provided by the California Invasive Plant Council (Cal-IPC), a nonprofit organization that aims to protect California's environment and economy from invasive plants. Cal-IPC maintains the California Invasive Plant Inventory, a comprehensive list of invasive plants based on ecological impacts, as well as "Watch" plants that may become invasive in the future. The following additional weeds that are assigned a "Moderate" or "High" rating by Cal-IPC were also observed on-site: yellow-star thistle, dyer's-woad, bouncing bet, Scotch broom, black locust, Bermuda grass, red-stemmed filaree, English plantain, orchard grass, fox-tail fescue, and woolly mullein (Cal-IPC, n.d.).

Weeds observed in the project area are of widespread distribution in the County and further spread of these weeds is not anticipated. However, other noxious weeds could be introduced into the project area during construction if construction vehicles are not properly washed before entering the project site. Soil import/export and use of certain erosion-control materials such as straw can also result in the spread of noxious weeds. As required by **MM 4.4.4,** the potential for introduction and spread of noxious weeds can be avoided/minimized by using only certified weed-free erosion control materials, mulch, and seed; limiting any import or export of fill material to material that is known to be weed free; and requiring the construction contractor to thoroughly wash all construction vehicles and equipment before entering and upon leaving the job site. Implementation of **MM 4.4.4** would reduce the potential impacts related to the introduction and spread of noxious weeds to a ***less-than-significant*** level.

With implementation of **MM 4.4.1** through **MM 4.4.4**, direct and indirect impacts to special-status species are ***less than significant***.

Questions B and C

According to CDFW, since the inception of the Natural Heritage Program in 1979, natural communities have been considered for their conservation significance. Unique natural communities were recorded in the CNDDB until the mid-1990s; at that time, funding for the natural community portion of the program was eliminated. Although natural communities are no longer being added to the CNDDB, many of the natural community occurrences maintained in the CNDDB still have significance for conservation, and their existence should be considered in the environmental review process.

Habitat Types/Sensitive Natural Communities

CNDDB records identified one sensitive natural community, a fen, which has been mapped approximately ~0.8 miles southwest of proposed improvements on the west side of Interstate 5 (I-5), north of Hatchery Lane. Due to the distance and I-5 separating the project site from the fen, the proposed project would not affect this community. CNDDB records do not identify any other sensitive natural communities within a five-mile radius of the project site (CDFW, 2023d, 2025a). In addition, the USFWS does not identify any designated critical habitats for federally listed species within the study area (USFWS, 2024, 2025).

The project study area supports urban habitat, a mixed-conifer forest, and montane chaparral habitat. The urban habitat consists of paved roads as well as residential and commercial development along Ski Village Drive. The urban habitat includes remnant native plant species, horticultural species, and introduced weeds, and is not considered a sensitive natural community.

The mixed-conifer forest is generally dominated by ponderosa pine, Douglas-fir, incense-cedar and black oak, with an understory of antelope bitterbrush, tobacco-brush, bitter cherry, and green-leaved manzanita. At the water tanks site and along the access road to the tank site and DEX-6 well, most of the understory has been cleared, resulting in an open conifer forest comprised primarily of trees with a diameter of ≤12 inches as measured at breast height (DBH). The mixed-conifer forest is best developed along North Mt. Shasta Boulevard near the base of Spring Hill and then transitions into montane chaparral habitat to the north of Spring Hill. The montane chaparral habitat includes antelope bitterbrush, tobacco-brush, bitter cherry, green-leaved manzanita, and other species with grasses and forbs in openings. Most lands adjacent to the road corridor were cleared in 2016 or 2017, and the re-growth has not yet formed a dense, impenetrable cover as is typical of mature montane chaparral habitats.

The significance of vegetation removal can be addressed based on CDFW's sensitivity ratings for natural communities. The sensitivity ratings are based on the rarity of the vegetative association and the extent of threats to the association. The mixed-conifer forest in the study area most closely resembles the Ponderosa Pine – Incense-Cedar – Douglas-Fir Forest and Woodland Association (87.005.00) described by CDFW. The montane chaparral habitat most closely resembles the Tobacco-Brush or Snowbush Chaparral Association (37.210.00) described by CDFW. Neither of these associations is considered sensitive by CDFW, as documented in the *California Natural Communities List* (CDFW, 2025d).

As discussed under Section 4.2 (Agriculture and Forestry Resources), construction of the two new water tanks and associated appurtenances would result in the conversion of ~0.75 acres of forest land to non-forest use. The new water lines and electrical line would be installed in or adjacent to existing roads; minimal vegetation removal would be needed to facilitate this work. Given that the vegetation associations are not sensitive and the habitats have been significantly disturbed by past brushing activities, there would be **no impact** to sensitive natural communities.

Wetlands and Other Jurisdictional Waters

The USFWS National Wetlands Inventory map did not identify any wetland features within the project area (USFWS, n.d.). ENPLAN conducted field investigations on May 3, May 23, and July 21, 2023, and August 27, 2024, to identify wetlands and other waters of the U.S. and State. The field investigations were conducted in accordance with technical methods outlined in the *Corps of Engineers Wetlands Delineation Manual* (U.S. Department of the Army, Corps of Engineers,

1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE, 2010), and *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (USACE, 2014).

No wetlands were identified in the study area during the field surveys. Although several erosional rills are present in the loose, sandy soil at the water tanks site and access road, erosional rills are not jurisdictional features.

As shown in **Figures 4.4-2 and 4.4-3**, roadside ditches are present along some of the road corridors and range from poorly developed to well developed. None of these features are "relatively permanent" nor do they connect to other waters of the U.S.; therefore, they are not subject to federal jurisdiction.

Although the ditches are not subject to federal jurisdiction and no permits from the USACE are required, they remain subject to State jurisdiction under the Porter-Cologne Act, and issuance of a Waste Discharge Permit (or waiver) by the RWQCB may be required. The City will consult with the RWQCB once project plans are finalized to determine permit requirements.

As noted in Section 1.8 (Permits and Approvals), to address potential indirect impacts on surface waters in the area, the applicant is required to obtain coverage under the NPDES permit for *Discharges of Storm Water Runoff Associated with Construction Activity* (Construction General Permit) by submitting a Notice of Intent to the RWQCB. The permitting process requires the development and implementation of a 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.

Therefore, because the project will not impact sensitive natural communities and BMPs would be implemented for erosion and sediment control, impacts would be ***less than significant.***

Question D

The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, nor would it impede the use of native wildlife nursery sites. Native wildlife nursery sites are locations where native fish and wildlife gather for breeding and raising young. These areas may include spawning areas for fish, fawning areas for deer, nesting rookeries for birds, and maternal roosts for bats.

CDFW identifies critical winter range for mule deer over two miles north of the project area and fawning ground over two miles to the northeast and east of the project area (CDFW, 2024a). Due to the distance from the proposed improvements, the project would not impact the critical winter range or fawning grounds. There is no habitat for fish in or adjacent to the project site.

However, as discussed under Question A, trees on the project site could provide habitat for bat maternity colonies and nesting birds. Implementation of **MM 4.4.1** (bat protections) and **MM 4.4.3** (nesting bird protections) ensures that the project does not interfere with wildlife nursery sites for birds and bats. Daytime movements of deer and other terrestrial wildlife species may be temporarily affected during construction activities; however, wildlife species would be able to alter their routes to move around the construction area. There is a slight possibility that wildlife could be trapped in open trenches and pipes during construction. **MM 4.4.5** would prevent the inadvertent entrapment of wildlife.

In summary, construction-related activities that may impede the movement of wildlife would be temporary and would cease at completion of the project, permanent fencing would not significantly impede the movement of wildlife, **MM 4.4.1** minimizes potential impacts to bats, **MM 4.4.3** minimizes the potential to adversely affect nesting birds, and **MM 4.4.5** would prevent the inadvertent entrapment of wildlife. Therefore, with implementation of the referenced mitigation measures, impacts on wildlife movement and use of nursery sites would be ***less than significant.***

Proposed Well Site

Interstate 5

Spring Hill Rd

Study Area Boundary
Constructed Ditch
Culvert
Flow Direction
Match Line

0 250 Feet

Path: N:\companyfiles\01-Jobs Active\032-54 PACE - Mt. Shasta Spring Hill Water Tank\3-Project GIS\3-Map Documents\Map Sessions\032-54 Mt. Shasta Spring Hill Fhub\032-54 Mt. Shasta Spring Hill Fhub.aprx

All depictions are approximate. Not a survey product. 05.08.25

Figure 4.4-2

Biological Survey Results

ENPLAN



Feature and boundary locations depicted are approximate only.
This is not a survey product.

05.08.25

ENPLAN

Figure 4.4-3

Biological Survey Results

Question E

Chapter 12.10 (City Tree Ordinance) of the City's Municipal Code includes provisions for the control, management, conservation, planting, and enhancement of trees. The Tree Ordinance applies only within commercial and industrial General Plan designations. The City's Director of Public Works has the responsibility to approve plans for public utilities that have the potential to damage street trees (City of Mt. Shasta, 2024). Although the water tanks site would include the removal of trees to facilitate improvements, the proposed project would not require the removal of any street trees.

As identified under Regulatory Context, the Open Space and Conservation Element of the City's General Plan includes goals, policies, and implementation measures related to the conservation of natural resources. Implementation of **MM 4.4.1** through **MM 4.4.5**, as well as BMPs for erosion and sediment control ensures consistency with local policies that protect biological resources. 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 FESA when a project results in the "take" of threatened or endangered wildlife. Regional HCPs address the "take" of listed species at a broader scale to avoid the need for project-by-project permitting. A Natural Community Conservation Plan (NCCP) is a state planning document administered by CDFW. There are no HCPs, NCCPs or other habitat conservation plans that apply to the proposed project (CDFW, 2024b). Therefore, there would be ***no impact***.

CUMULATIVE IMPACTS

Cumulative projects in the vicinity of the project area, including growth resulting from build-out of the City's and County's General Plans, are anticipated to permanently remove plant and wildlife resources. As development in the area continues, sensitive plant and wildlife species native to the region and their habitat, including state and federally listed species, will be lost through conversion of existing open space to urban development. With continued conversion of natural habitat to human use, the availability and accessibility of remaining foraging and natural habitats in this ecosystem would dwindle, and those remaining natural areas may not be able to support additional plant or wildlife populations. 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.

However, all development projects are required to comply with federal, state, and local regulations, including but not limited to those identified under Regulatory Context above. In addition, all projects are required to implement appropriate Best Management Practices (BMPs) to control erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat, and must implement appropriate mitigation measures to reduce project-specific impacts. Compliance with the implementation of BMPs for spill prevention and erosion control, and implementation of **MM 4.4.1** through **MM 4.4.5** would avoid, reduce, or mitigate potential impacts to biological resources. These measures ensure that the proposed project's contribution to cumulative regional impacts to biological resources would be ***less than significant***.

MITIGATION

MM 4.4.1 To avoid impacts to active bat maternity colonies, tree removal for trees of 12" diameter at breast height (DBH) or larger shall occur only during the following time frames and subject to the following weather conditions, or as otherwise approved/recommended by a qualified bat biologist:

- Between March 1 (or after evening temperatures rise above 45°F, and/or no more than ½" of rainfall within 24 hours occurs), and April 15; and
- Between September 1 and October 15 (or before evening temperatures fall below 45°F, and/or more than ½" of rainfall within 24 hours occurs).

Unless deemed unnecessary by the qualified bat biologist, trees greater than 12" DBH shall be removed using a two-step process to allow bats the opportunity to abandon the roost prior to removal. The two-step removal process shall be as follows:

- Day 1: Remove small-diameter trees, brush, and non-habitat features of large trees (branches without cavities, crevices, or exfoliating bark), using chainsaws for cutting, and chippers wherever possible to cause a level of noise and vibration disturbance sufficient to cause bats to choose not to return to the tree for a few days after they emerge to forage.
- Day 2: Remove the remainder of the trimmed tree.

MM 4.4.2 If the western migratory population of the monarch butterfly remains designated as proposed threatened, or is listed as threatened or endangered at the time of construction, the following measures shall be implemented as applicable:

a. If the final waterline alignment is located outside of the pavement on Spring Hill Road, a field survey shall be undertaken in early to mid-May (prior to arrival of the butterflies) to determine if milkweeds (*Asclepias* spp.) are present in or adjacent to the work area. If no milkweeds are present, no further action is required.

b. If milkweeds are present in or adjacent to the work area and can be avoided during construction, temporary high-visibility indicators such as marking whiskers, pin flags, stakes with flagging tape, or other markers shall be established to protect the plants; the markers/flags shall be maintained in good condition throughout the duration of construction.

c. If the milkweeds cannot be avoided, then they shall be removed as early in the season as possible. If monarchs arrive in the general project area prior to removal of the milkweeds, a biologist shall inspect each milkweed for the presence of monarch butterfly eggs, larvae, and pupae prior to plant removal. If monarch butterfly eggs, larvae, or pupae are present, the milkweed shall not be removed until the biologist determines that the milkweed is no longer hosting the monarch butterfly. This may require rescheduling of construction in those areas supporting milkweeds.

d. If removal of milkweeds is required at any time during the pre-construction or construction periods, one of the following options shall be implemented:

   i. If, prior to project initiation, the U.S. Fish and Wildlife Service (USFWS) approves a mitigation banking or in-lieu fee program to offset impacts to the monarch butterfly, credits shall be purchased or fees paid at an amount/ratio acceptable to the USFWS. Proof of purchase shall be provided to the federal lead agency prior to project completion.

   ii. If no mitigation banking or in-lieu fee program is approved by the USFWS prior to project initiation, milkweeds shall be reestablished in the immediate area in the fall or spring following completion of construction. This shall be accomplished by planting seeds or rooted milkweed seedlings. The planted milkweeds shall be of the same species as those removed. Planting shall be conducted at a sufficiently high ratio to ensure success, which is defined as establishing at least one milkweed plant per milkweed plant removed as determined through field monitoring one year after the milkweed planting is undertaken. If the minimum success ratio is not met, milkweed seeding/planting shall continue in successive years until the success criterion is met. Documentation regarding milkweed reestablishment and success shall be provided to the federal lead agency on an annual basis until the success criterion is met.

MM 4.4.3 In order to avoid impacts to nesting migratory birds and/or 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 commence 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 electronically to the California Department of Fish and Wildlife at **R1CEQARedding@wildlife.ca.gov** upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

If active nests are found, the applicant shall consult with CDFW and the USFWS regarding appropriate action to comply with the Migratory Bird Treaty Act and California Fish and Game Code §3503. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

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

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

b. Limiting any import or export of fill material to material that is known to be weed free.

c. Requiring the construction contractor to thoroughly inspect and clean construction equipment prior to entering and upon leaving the job site. All equipment and vehicles shall be washed off-site at a commercial facility when possible. If off-site washing is infeasible, an on-site cleaning station shall be set up at a specified location. Either high-pressure water or air shall be used to clean equipment. The cleaning station shall be located away from sensitive biological resources, and wastewater from the cleaning station shall not be allowed to run off the cleaning station site.

Construction equipment shall be cleaned of dirt and mud that could contain invasive plants, roots, or seeds; tracks, outriggers, tires, and undercarriages shall be carefully washed, with special attention being paid to axles, frames, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Other construction vehicles (e.g., pick-up trucks) that will be frequently entering and exiting the site shall be inspected and washed on an as-needed basis.

MM 4.4.5 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.

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4.5 CULTURAL RESOURCES

Would the project:

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

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:*
>
> - *The property is associated with events that have made a significant contribution to the broad patterns of our history;*
> - *The property is associated with the lives of persons significant in our past;*
> - *The property embodies 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*
> - *The property has yielded, or is 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
7. The transfer, lease, or sale of the property out of federal ownership or control without restrictions or conditions to ensure long-term preservation of the property's historic significance.

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 (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 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

City of Mt. Shasta General Plan, Open Space and Conservation Element

The City's General Plan includes the following Goal, Policy, and Implementation Measures (IMs) that apply to the proposed project:

City of Mt. Shasta General Plan – Open Space and Conservation Element		
Goal	OC-8	Preserve areas of significant cultural resources.
Policy	OC-8.1	Ensure that appropriate measures are taken concerning protection or study of significant cultural resources.
IMs	OC-8.1(b)	When projects are proposed on lands identified as having Medium Cultural Resource Sensitivity, the application shall be accompanied by an Archival Report compiled by a qualified archaeologist. If there is likelihood that cultural resources are present on the site, the City may require field reconnaissance or other similar study to determine the location, potential for disturbance, and scope of mitigation.
	OC-8.1(c)	The scope of mitigation shall conform to the requirements of the California Environmental Quality Act with an emphasis on avoiding, if feasible, disturbance of the cultural resource. Avoidance may be accomplished by capping the site, if appropriate.
	OC-8.1(d)	When approving construction projects, the City shall incorporate the following mitigation measure, or a similar measure that would fulfill the intent: Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, or architectural remains be encountered during development activities, work shall be suspended and the City Planning Department shall be immediately notified. At that time, the City will coordinate any necessary investigation of the discovery with an appropriate specialist (e.g., archaeologist or architectural historian). The project proponent shall be required to implement mitigation necessary for the protection of cultural resources. The City and the project applicant shall consider mitigation recommendations presented by a qualified archeologist for any unanticipated discoveries. The City and the project applicant shall consult and agree upon implementation of a measure or measures that the City and project applicant deem feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.
	OC-8.1(e)	When approving construction projects, the City shall incorporate the following mitigation measure, or a similar measure that would fulfill the intent: If human remains are discovered, all work must stop in the immediate vicinity of the find, and the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

DISCUSSION OF IMPACTS

Questions A and B

A Cultural Resources Inventory (CRI) Report was completed for the proposed project by ENPLAN in March 2025. The study included a records search, Native American consultation, and field evaluation. The records search was conducted to identify previously conducted cultural resources surveys and recorded sites in the project area.

The records search included review of records at the Northeast Information Center of the California Historical Resources Information System at California State University, Chico (NEIC/CHRIS); 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); and historical maps and aerial photographs.

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 horizontal APE includes the entirety of the project site, totaling ~13.4 acres, as depicted in **Figure 2**. The vertical APE (i.e., associated with the potential for buried cultural resources) is based on the engineering design of the project and reflects the planned depths of the excavations associated with the project. The maximum vertical APE is approximately six feet.

Records Search

Research was conducted at the NEIC/CHRIS on October 1, 2024. The records search covered an approximate 1/2-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 20 cultural resource surveys have been conducted within a 1/2-mile radius of the project APE, four of which encompassed a portion of the APE. There are eight previously recorded sites in the 1/2-mile search radius; however, none of the sites are within the 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.

Native American Consultation

In response to ENPLAN's request for information on August 28, 2024, 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 provided contact information for several Native American representatives and organizations.

Comment solicitation letters were sent by ENPLAN on December 10, 2024, Russell Attebery, Chairperson, and Alex Watts-Tobin, Tribal Historic Preservation Officer (THPO), Karuk Tribe; William Ray Jr., Chairperson, and Les Anderson, Cultural and Heritage Department, Klamath Tribe; Ken Sandusky, Resource and Development Director, Modoc Nation; Natalie Forrest-Perez, THPO Coordinator, Pit River Tribe of California; Jack Potter, Chairperson, Lillie Lucero, Tribal Historic Preservation Agent, and Tracy Edwards, Chief Executive Officer, Redding Rancheria; Sami Jo Difuntorum, Culture Preservation Officer, Shasta Indian Nation; Roy Hall Jr., Chairperson, Shasta Nation; Caleen Sisk, Chief, and Mark Miyoshi, THPO, Winnemem Wintu Tribe; and Gary Rickard, Chairperson, and Art Garcia, Cultural Resource Director, Wintu Tribe of Northern California.

The Karuk Tribe responded on December 10, 2024, indicating the Tribe had no specific cultural resources information about the project area. The Shasta Indian Nation responded on December 10, 2024, stating that the Tribe was not aware of cultural resources within the project area. The Wintu Tribe of Northern California responded on December 10, 2024, requesting information about the archaeological survey. An ENPLAN archaeologist provided the requested information on December 11, 2024.

Follow-up correspondence was conducted on January 29, 2025, with the Tribes that had not provided a response to the original solicitation. The Winnemem Wintu Tribe responded on January 29, 2025, indicating that although the groundwater from the Mountain is considered a traditional cultural property, the Tribe had no known cultural properties in the project area, and requested further information about the new well. The Modoc Nation responded on January 29, 2025, indicating potential concerns based on a precursory review of the location of the project; however, the Tribe stated that they would review the project information provided and follow up with the ENPLAN archaeologist if they identified concerns with the project. The Klamath Tribe responded on January 29, 2025, indicating the project area is located on the outskirts of the Tribe's ceded area, and provided contact information for personnel at the Cultural and Heritage Department who may have more information. An ENPLAN archaeologist called and left a message with the Department on January 29, 2025. No other responses were received.

Fieldwork Evaluation

Archaeological fieldwork was completed by an ENPLAN archaeologist on September 21, 2024, to identify cultural resources that would be potentially affected by the proposed project. The entire APE was surveyed with transects spaced 5 to 20 meters apart. Areas with exposed subsurface soil were thoroughly inspected for evidence of any possible buried cultural deposits and/or soil differentiation. Ground visibility ranged from poor to excellent (0 to 100 percent) throughout the APE. Visibility was primarily constrained due to the presence of existing small structures, concrete coverage, graded roads, and paved roads.

Conclusions

The cultural resources evaluation concluded that there are no known prehistoric or historical-era resources in the APE. Therefore, the project would not affect any resource on, or eligible for listing on, the NRHP or CRHR.

However, there is always some potential for previously unknown cultural resources to be encountered during project excavation.

According to U.S. Department of Agriculture (USDA), Natural Resources Conservation Service, the APE is comprised of the following soils: Asta gravelly sandy loam, 15 to 50 percent slopes; Deetz gravelly loamy sand, 0 to 5 percent slopes; Deetz gravelly loamy sand, 5 to 15 percent slopes; and Neer-Ponto stony sandy loams, 15 to 50 percent slopes complex (USDA, 2024).

Asta gravelly sandy loams date to the Early Holocene (11,500-7,000 BP), Deetz gravelly loamy sands date to the Late Holocene (4,000 to 2,000 BP), and Neer-Ponto stony sandy loams date to the Late Pleistocene (25,000-15,000 BP). According to Meyer (2013), Early Holocene-age soils are considered to have a low potential for buried cultural deposits; Late Holocene-age soils are considered to have a moderate to high potential for buried cultural resources; and Late Pleistocene-age soils are considered to have a low potential for buried cultural deposits.

Based on the geomorphological and topographic characteristics of the project area, the results of the records and literature search, Native American consultation, and the age of the soils mapped in the area, the project area has a low to moderate potential for intact surface and buried historical and prehistoric cultural resources. **MM 4.5.1** 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. **MM 4.5.2** 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 documented above, the project would have no impact on any known prehistoric or historical-era resources. **MM 4.5.1 and MM 4.5.2** 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 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 City of Mt. Shasta (City) 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 City prior to resuming construction.

MM 4.5.2 In the event that human remains are encountered during construction activities, the City shall comply with §15064.5 (e) (1) of the CEQA Guidelines and PRC §7050.5. All project-related ground disturbance within 50 feet of the find shall be halted until the County coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the NAHC to identify the most likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed in §15064.5 (e) has been completed.

DOCUMENTATION

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U.S. Department of Agriculture, Natural Resources Conservation Service. 2024. Web Soil Survey. https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed February 2025.

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?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

REGULATORY CONTEXT

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

STATE

California Environmental Quality Act (CEQA)

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

Renewables Portfolio Standard

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

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

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

In-Use Off Road Diesel-Fueled Fleets Regulation

CARB adopted the In-Use Off-Road Diesel-Fueled Fleets Regulation to reduce NO_X, diesel particulate matter, and other criteria pollutant emissions from various vehicles subject to the regulation. The regulation covers a wide range of vehicle types, including, but not limited to, vehicles used in construction, mining, industrial operations, and other industries. The regulations were most recently updated in August 2023 and became effective on October 1, 2023 (CARB, 2023).

The regulations require fleets to phase-out use of the oldest and highest polluting off-road diesel vehicles in California earlier or beyond what was required of fleets in the previous Off-Road Regulation. The amended regulations are being phased starting in 2024 and ending in 2036. Beginning January 1, 2024, the updated regulations also require the use of renewable diesel (99 or 100 percent renewable) in all vehicles that are subject to the regulation, subject to certain exemptions.

The amended regulations require that beginning January 1, 2024, public agencies that award or enter into contracts for public works projects obtain fleet Certificates of Reported Compliance prior to awarding public works contracts. These requirements will ensure that only compliant fleets are being used on public works projects. CARB estimates that from 2024 through 2038, the amendments will generate an additional reduction above and beyond the current regulation of approximately 31,218 tons of NO_X and 2,729 tons of $PM_{2.5}$ (CARB, 2022). About half of those additional reductions are expected to be realized within the first five years of implementation.

California Building Standards Code

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

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

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

Warren-Alquist Act (1974)

The Warren-Alquist Act (Public Resources Code §25000 *et seq.*) established the California Energy Resources Conservation and Development Commission (California Energy Commission [CEC]) in 1974 to respond to the energy crisis of the early 1970s and the State's unsustainable growing demand for energy resources (PRC, 2024). The Act mandates that the CEC create and periodically update Building Energy Efficiency Standards for the State.

LOCAL

City of Mt. Shasta General Plan, Open Space and Conservation Element

The City's General Plan includes the following Goal, Policy, and Implementation Measures (IMs) that apply to the proposed project:

City of Mt. Shasta General Plan – Open Space and Conservation Element		
Goal	OC-12	Strive to conserve energy resources.
Policy	OC-13.1	Work with individuals and companies to correctly site, connect and operate alternative energy systems such as wind, solar, hydro, and other sustainable sources.
IMs	OC-12.1(a)	Where feasible, require all new buildings and subdivisions to be designed and oriented in such a way as to take maximum advantage of the sun and winds for natural heating and cooling.

OC-12.1(b)	In addition to enforcing the energy efficiency requirements of state law and the Uniform Building Code, encourage the incorporation of additional energy conservation techniques, such as innovation building construction, high-efficiency HVAC systems, etc. in new construction.

DISCUSSION OF IMPACTS

Question A

Energy consumption during construction would occur primarily from the use of fuels for construction equipment and haul trucks, and construction workers traveling to and from the work site. As stated under Regulatory Context, the In-Use Off-Road Diesel-Fueled Fleets Regulation applies to off-road heavy-duty diesel vehicles in California, including vehicles used in construction. The regulation imposes limits on idling, restricts adding older vehicles into fleets, and requires that fleet owners reduce their emissions by retiring, replacing, repowering, or retrofitting older engines.

Additional requirements, including the requirement to use renewable diesel fuel in off-road diesel vehicles, are being phased in starting in 2024 through 2036 (CARB, 2023).

Power would be provided to the project by PacificCorp. The project would result in an increase in energy use due to electricity used to operate the new well and water tanks, and for security lighting. As described under Regulatory Context, design of the project would be in conformance with the CBSC, including the energy efficiency standards included in the California Energy Code and CALGreen. In addition, the new emergency generator would be used only in the event of an emergency and for limited times during monthly testing.

The use of fuel-efficient equipment during construction, compliance with State building codes, and installation of energy efficient equipment and facilities ensures that energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary, and that the project would not conflict with or obstruct a plan for renewable energy or energy efficiency. Therefore, impacts associated with energy use 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 City's and County's General Plans, 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 the State's regulations that require the use of fuel-efficient equipment during construction. In addition, new construction must comply with energy efficiency standards included in the CBSC. Compliance with State regulations ensures that the proposed project's cumulative impacts on energy resources would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Air Resources Board (CARB). 2023. In-Use Off-Road Diesel-Fueled Fleets, Final Regulation Order (Rulemaking Website). https://ww2.arb.ca.gov/rulemaking/2022/off-roaddiesel. Accessed January 2025.

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City of Mt. Shasta. 2007. City of Mt. Shasta General Plan, Open Space and Conservation Element. https://www.mtshastaca.gov/planning-department/page/current-planning-projects. Accessed January 2025.

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

REGULATORY CONTEXT

FEDERAL

National Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction 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 to reduce the adverse effects of earthquakes in order to strengthen earthquake resilience among at-risk communities. The Federal Emergency Management Agency (FEMA) is designated as the lead agency of the program.

Paleontological Resources Preservation Act

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

STATE

California Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (PRC §2621 *et seq.*) was passed in 1972 to reduce the risk to life and property from surface faulting in California. The Act prohibits the siting of most structures intended for human occupancy on the surface trace of 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.

Protection of Paleontological Resources

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

LOCAL

City of Mt. Shasta General Plan, Open Space and Conservation Element and Safety Element

The City's General Plan includes the following Goal, Policy, and Implementation Measures (IMs) that apply to the proposed project:

City of Mt. Shasta General Plan– Open Space and Conservation Element		
IM	OC-8.1(f)	When approving construction projects, the City shall incorporate the following mitigation measures, or similar measures that would fulfill the intent: Should any potentially unique paleontological resources (fossils) be encountered during development activities, work shall be suspended and the City Planning Department shall be immediately notified. At that time, the City will coordinate any necessary investigation of the discovery with a qualified paleontologist. The project proponent shall be required to implement mitigation necessary for the protection of paleontological resources. The City and the project applicant shall consider the mitigation recommendations of the qualified paleontologist for unanticipated discoveries. The City and the project applicant shall consult and agree upon implementation of a measure or measures that the City and project applicant deem feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.

City of Mt. Shasta General Plan – Safety Element		
Goal	SF-2	Assure life and property are adequately protected from seismic hazards in the area.
Policy	SF-2.1	Avoid development in areas of steep slope and high erosion potential.
IM	SF-2.1(c)	Ensure that site development on steep slopes is designed to avoid creating areas that may be subject to slippage or movement from storm events.

DISCUSSION OF IMPACTS

Question A

i and ii)

According to the California Department of Conservation (DOC), there are no Alquist-Priolo Special Study Zones in the project area. The nearest Alquist-Priolo Special Study Zone is the Stephens Pass Fault Zone, approximately 24 miles to the northeast (DOC, n.d.a, n.d.b). According to the DOC, the nearest potentially active faults are located east and north of the project area. The unnamed fault to the east is a north-south trending fault running through the top of Mount Shasta. The unnamed fault to the north is an east-west trending fault that runs from the top of Mount Shasta to a point north of Black Butte (DOC, 2022a).

According to the Siskiyou County Local Hazard Mitigation Plan Update, there have been thousands of earthquakes of various magnitudes in Siskiyou County over the past 70 years; however, only a small number have exceeded a magnitude of 3.0, and only seven earthquakes in or near Siskiyou County have exceeded a magnitude of 4.5 (Siskiyou County, 2025).

Project implementation would not increase the exposure of people to risks associated with a seismic event; however, if not properly designed, project components such as the proposed water tanks could be susceptible to seismic-related damage.

As required by **MM 4.7.1**, a geotechnical study will be completed for the proposed project. The study will include site reconnaissance, drilling and logging of exploratory borings, sampling of the subsurface soils, and laboratory testing of the soil samples. The study will include an evaluation of physical and engineering properties of the subsurface soils, and engineering analysis of potential geologic hazards (i.e., seismic hazards, landslides, liquefaction, settlement, expansive soils, etc.). The project would be designed in accordance with USGS Seismic Design Maps, CBSC seismic design specifications, and other applicable seismic design standards. Recommendations for project design and construction methods would be included in the geotechnical report

To ensure that the recommendations in the geotechnical report are incorporated into the project design, **MM 4.7.1** requires that grading and foundation plans for the water tanks site must be reviewed by a qualified professional to ensure that the recommendations are implemented. **MM 4.7.2** requires that work activities are monitored and inspected as recommended in the geotechnical report. Implementation of **MM 4.7.1** and **MM 4.7.2** ensures that impacts associated with seismic activity and seismic-related ground failure would be ***less than significant.***

iii)

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

As shown in **Table 4.7-1**, due to soil type, it is possible that liquefaction could occur in some areas.

TABLE 4.7-1
Soil Type and Characteristics

Location / Acreage	Soil Unit Symbol and Name	Landform and Parent Material	Erosion Potential	Drainage	Surface Runoff	Permeability	Shrink-Swell Potential
Portion of corridor on Water Tanks Site 0.03 acres	102 - Asta gravelly sandy loam, 15 to 50 percent slopes	Terraces; Deposited over glacial outwash and volcanic ash derived from volcanic rock	High	Well drained	Medium	Moderate	Low
Water Tanks site; utility corridor on Water Tanks site and Ski Village Dr. 5.4 acres	125 - Deetz gravelly loamy sand, 0 to 5 percent slopes	Outwash fans; Glaciofluvial deposits derived from igneous rock	Slight	Somewhat excessively drained	Negligible	Rapid	Low
New Well Site; Spring Hill Rd. Corridor 5.8 acres	126 - Deetz gravelly loamy sand, 5 to 15 percent slopes	Outwash fans; Glaciofluvial deposits derived from igneous rock	Moderate	Somewhat excessively drained	Very low	Rapid	Low
Portion of N. Mt. Shasta Blvd. Corridor 2.2 acres	196 - Neer-Ponto stony sandy loams, 15 to 50 percent slopes complex	Hills; Volcanic ash derived from volcanic rock	High	Well drained	Low	Rapid to Moderate	Low

Source: U.S. Department of Agriculture (USDA), Natural Resources Conservation Service, 2024; USDA, Soil Survey of Siskiyou County, California, Central Part 1, 1983.

As stated under Questions i) and ii), a geotechnical report will be prepared for the water tanks site and will include an evaluation of physical and engineering properties of the subsurface soils, and engineering analysis of potential geologic hazards, including liquefaction. Recommendations would be included to ensure that potential geologic hazards are addressed through engineering design and construction methods.

MM 4.7.1 requires that grading and foundation plans for the water tanks site must be reviewed by a qualified professional to ensure that the recommendations are implemented. **MM 4.7.2** requires that work activities are monitored and inspected as recommended in the geotechnical report. Implementation of **MM 4.7.1** and **MM 4.7.2** ensures that impacts associated with potential liquefaction would be ***less than significant.***

iv)

A landslide is a mass of rock, earth, or debris moving down a slope. Landslides are most likely to occur in steep areas with weak rocks where the soil is saturated from heavy rains or snowmelt. The Landslide Susceptibility Map included in the Draft 2025 Siskiyou County Local Hazard Mitigation Plan Update indicates that areas in which improvements are proposed have a low susceptibility for landslide hazards (Siskiyou County, 2025). Earthwork that alters the shape of a slope or imposes new loads on an existing slope could increase the potential for landslides. The geotechnical report will evaluate site-specific conditions and include recommendations as necessary to minimize potential impacts related to landslides. Implementation of **MM 4.7.1** and **MM 4.7.2** ensures that potential impacts would be ***less than significant***.

Question B

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

As noted in Section 1.8 (Permits and Approvals), the City is required to obtain coverage under the NPDES permit for *Discharges of Storm Water Runoff Associated with Construction Activity* (Construction General Permit) by submitting a Notice of Intent to the RWQCB. The permitting process requires the development and implementation of an effective SWPPP that includes BMPs to minimize erosion. Measures could include 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 Questions A and B above. Unstable soils consist of loose or soft deposits of sands, silts, and clays. Expansive soils generally contain clays that swell when they absorb water and shrink when they dry out. When expansive soils swell, the change in volume can exert pressure on loads that are upon them.

As shown in **Table 4.7-1**, none of the soils in the project site have a high shrink-swell potential; however, as stated under Questions A (iii and iv), any areas within the project site with unstable and/or expansive soils would be identified during completion of the geotechnical study as required by **MM 4.7.1. MM 4.7.2** ensures that construction activities are monitored as recommended in the geotechnical study. The geotechnical report will include recommendations for building foundation, structural systems, ground stabilization, and/or other measures to minimize impacts. Implementation of **MM 4.7.1** and **MM 4.7.2** ensures that impacts associated with unstable and expansive soils 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 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; as such, they are a non-renewable resource. Fossils are found primarily embedded in sedimentary rocks, mostly shale, limestone, and sandstone. With rare exceptions, metamorphic and igneous rocks have undergone too much heat and pressure to preserve fossils; however, when ash from volcanic eruptions buries the surrounding area, the ash sometimes encapsulates organisms.

A review of U.C. Berkeley Museum of Paleontology (UCMP) records showed that 125 paleontological resources sites have been discovered in Siskiyou County (UCMP, n.d.a). Within these sites, 122 fossils have been recorded in the County (UCMP, n.d.b); however, specific locations of these specimens are not disclosed.

According to the DOC, the geology of the project area consists of Pleistocene-Holocene era marine and nonmarine sedimentary rocks, and Quaternary era volcanic rocks (DOC, 2022b). Because paleontological resources and fossils are found primarily within sedimentary rock deposits, fossilized paleontological resources may be present in the project area. The project area has no unique geological features; however, there is a possibility that unanticipated paleontological resources could be encountered during ground-disturbing project-related activities. **MM 4.7.3** addresses the inadvertent discovery of paleontological resources and ensures that 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 City's General Plan, could result in increased erosion and soil hazards and

could expose additional structures and people to seismic hazards. In addition, ground disturbance has the potential to destroy paleontological resources.

As discussed above, all development projects in the County that are over one acre in size 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 and implementing a SWPPP that includes BMPs to minimize erosion. In addition, pursuant to existing State regulations, incorporation of CBSC seismic design criteria and engineering design measures are required for all new development projects. Implementation of **MM 4.7.1**, **MM 4.7.2**, and **MM 4.7.3** ensures that the project's impacts are not cumulatively considerable.

MITIGATION

MM 4.7.1 Prior to approval of the final improvement plans for the water tanks site, a geotechnical exploration report shall be prepared by a geotechnical engineer or other qualified professional to evaluate the surface and subsurface soil conditions at the water tanks site and identify geotechnical criteria for site excavations, design of foundations, installation of drainage facilities, and other related improvements.

All grading plans and foundation plans for the water tanks shall be reviewed by a qualified professional to ensure that all recommendations included in the geotechnical report are implemented. Applicable notes shall be placed on the attachment sheet to the improvements plans and in applicable project plans and specifications.

If significant engineering design changes occur during construction, the City of Mt. Shasta shall consult with a qualified geotechnical engineer to identify any geotechnical constraints related to the design changes. Recommendations of the geotechnical engineer shall be implemented as warranted.

MM 4.7.2 The City of Mt. Shasta shall ensure through contractual obligations that earthwork activities are monitored by a qualified professional to ensure that recommendations included in the geotechnical report are implemented.

MM 4.7.3 If paleontological resources (fossils) are discovered during construction, all work within a 50-foot radius of the find shall be halted until a professional paleontologist can evaluate the significance of the find. If any find is determined to be significant by the paleontologist, City of Mt. Shasta (City) representatives shall meet with the paleontologist to determine the appropriate course of action. If necessary, a Treatment Plan prepared by a paleontologist outlining recovery of the resource, analysis, and reporting of the find, shall be prepared. The Treatment Plan shall be reviewed and approved by the City prior to resuming construction.

DOCUMENTATION

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4.8 GREENHOUSE GAS EMISSIONS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

REGULATORY CONTEXT

There are no federal or local regulations pertaining to greenhouse gas emissions that apply to the proposed project.

STATE

California Executive Order 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 metric tons (MT) CO_2 equivalent (CO_2e) units 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.

California Executive Order B-55-18

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

2022 Scoping Plan for Achieving Carbon Neutrality

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

working lands and implementing mechanical approaches (e.g., capture at point sources and direct removal from the atmosphere through direct air capture).

Senate Bill 32/Assembly Bill 197 (2016)

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

Renewables Portfolio Standard

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

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

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

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

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

Mobile Source Strategy

CARB's 2020 Mobile Source Strategy (Strategy), describes the State's strategy for containing air pollutant emissions from vehicles, and quantifies growth in vehicle miles traveled that is compatible with achieving state climate targets (CARB, 2021). The Strategy demonstrates how the State can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risks from transportation emissions, and reduce petroleum consumption over the next fifteen years.

In-Use Off-Road Diesel-Fueled Fleets Regulation

CARB adopted the In-Use Off-Road Diesel-Fueled Fleets Regulation to reduce NO_X, diesel particulate matter, and other criteria pollutant emissions from off-road heavy-duty diesel vehicles in California. The regulation covers a wide range of vehicle types, including, but not limited to, vehicles used in construction, mining, industrial operations, and other industries. The regulations were most recently updated in August 2023 and became effective on October 1, 2023 (CARB, 2023).

The regulations require fleets to phase-out use of the oldest and highest polluting off-road diesel vehicles in California earlier or beyond what was required of fleets in the previous Off-Road Regulation. The amended regulations are being phased which started in 2024 and would end in 2036. Beginning January 1, 2024, the updated regulations also require the use of renewable diesel (99 or 100 percent renewable) in all vehicles that are subject to the regulation, subject to certain exemptions.

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

public works projects. CARB estimates that from 2024 through 2038, the amendments will generate an additional reduction above and beyond the current regulation of approximately 31,218 tons of NO_X and 2,729 tons of $PM_{2.5}$ (CARB, 2022b). About half of those additional reductions are expected to be realized within the first five years of implementation.

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 GHG emissions in particular, lead agencies may determine that it is appropriate to use the same method used to determine the transportation impacts associated with a project's vehicle miles traveled (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 app. 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)	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)	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.

Greenhouse Gas	Description
Nitrous oxide (N_2O)	In 2014, N_2O 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_2O in the atmosphere.
Hydrofluorocarbons (HFCs)	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)	PFCs are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F_4). Perfluorocarbons are produced as a byproduct of various industrial processes associated with aluminum production and the manufacturing of semiconductors.
Sulfur hexafluoride (SF_6)	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.

Source: USEPA, 2024.

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 (CARB, n.d.).

Gases with a higher GWP absorb more heat than gases with a lower GWP and thus have a greater effect on global warming and climate change. The GWP metric is used to convert all GHGs into CO_2e 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	100*
CH_4	25	12
N_2O	298	114
HFCs	Up to 14,800	Up to 270
PFCs:	Up to 12,200	2,600 – 50,000
SF_6	22,800	3,200
NF_3	17,200	740

Source: California Air Resources Board (CARB, n.d.).

** No single lifetime can be given for CO_2 because it moves throughout the earth system at differing rates. Some CO_2 will be absorbed very quickly, while some will remain in the atmosphere for thousands of years.*

Thresholds of Significance

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

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

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

Neither the City nor the Siskiyou County Air Pollution Control District (SCAPCD) have adopted numerical thresholds of significance or performance-based standards for GHG emissions. Numerical thresholds that have been referenced for other projects in the region range from 900 MT/year CO_2e (Tehama County) to 1,100 MT/year CO_2e for both construction and operational emissions and 10,000 MT/year CO_2e for stationary sources (various communities in the Sacramento Valley and Northeast Plateau air basins).

In order to assess the potential impact of emissions generated during construction of the proposed project, the construction GHG emissions are amortized over an assumed 30-year project lifespan, added to operational emissions, and compared against a threshold of 1,100 MT/year CO_2e.

Project GHG Emissions

GHG emissions for the proposed project were estimated using the CalEEMod Version 2022.1.1.29 software. Output files, as well as site-specific inputs and assumptions, are provided in **Appendix A**. CalEEMod is a statewide model designed to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation

(including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

CalEEMod also includes the intensity factors for CO_2, CH_4, and N_2O for the utility company that will serve the proposed project. Therefore, CalEEMod uses PacificCorp's mix of renewable and non-renewable energy sources to estimate indirect GHG emissions associated with electricity use. Site-specific inputs and assumptions for the proposed project include, but are not limited to, the following.

- Emissions from construction are based on all construction-related activities associated with the proposed uses, including but not limited to grading, site preparation, use of construction equipment, material hauling, trenching, site preparation, application of architectural coatings, and paving.
- For purposes of the CalEEMod Analysis, it was assumed construction would start in May 2027 and occur over a period of approximately 24 months.
- Total land disturbance would be approximately 1.9 acres; 50 cubic yards (CY) of material would be imported; 1,700 CY would be exported.
- The total area to be paved would be 0.4 acres.
- The total weight of demolition debris (pavement) to be removed from the project site would be approximately 320 tons.
- The total area receiving architectural coatings would be 31,940 square feet.
- To represent a worst-case scenario, it was assumed that approximately 90 trees 6-inch DBH and larger would be removed to facilitate construction at the water tanks site.

Construction Emissions

Estimated construction-related GHG emissions are shown in **Table 4.8-3**; the majority of emissions are from the combustion of diesel fuel in heavy equipment.

TABLE 4.8-3
Estimated Construction-Related Greenhouse Gas Emissions

Total Construction Emissions (Metric Tons/Year)					
Year	**Carbon Dioxide (CO_2)**	**Methane (CH_4)**	**Nitrous Oxide (N_2O)**	**Refrigerants (Type of HFCs)**	**Carbon Dioxide Equivalent (CO_2e)**
2027	202	0.01	< 0.005	0.01	203
2028	266	0.01	< 0.005	0.01	268
2029	177	0.01	< 0.005	0.01	178
Total	**645**	**0.03**	**< 0.02**	**0.03**	**649**

Source: CalEEMod, 2025. Note: Totals may not add due to rounding.

Operational Emissions

As stated in Section 4.3 (Air Quality) under Questions A and B, the project's increase in operational emissions over existing levels would be attributed to the addition of energy consumption to operate the new pumps and motors inside the well building, electrical equipment for the two new water tanks, and lighting at the well and water tanks sites. The generation of electricity through combustion of fossil fuels (e.g., coal, natural gas, and petroleum) produces GHG emissions.

Table 4.8-4 shows the estimated highest daily levels of operational emissions by source. For the proposed project, Mobile sources include on-road motor vehicles and off-road engines and equipment used for maintenance activities. Area sources include consumer products, architectural coatings, and road dust. Energy sources include electricity generated from fossil fuels (indirect emissions) that is used to operate pumps, motors, etc. Reporting under Water includes increased demand associated with general maintenance activities. Solid waste includes increased solid waste generation associated with the project. Refrigerants include those used in vehicles and cooling systems.

Stationary sources include the emergency back-up generator. Reporting under Vegetation reflects changes in sequestration from land use changes and tree removal. Construction emissions are amortized over a 30-year period, which is considered the minimum service life of the project, and added to the operational emissions.

TABLE 4.8-4
Estimated Annual Operational Greenhouse Gas Emissions

Total Operational Emissions (Metric Tons/Year)					
Source	**Carbon Dioxide (CO_2)**	**Methane (CH_4)**	**Nitrous Oxide (N_2O)**	**Refrigerants (Type of HFCs)**	**Carbon Dioxide Equivalent (CO_2e)**
Mobile	21.2	< 0.005	< 0.005	0.03	21.7
Area	0.08	< 0.005	< 0.005	0	0.08
Energy	32.9	< 0.005	< 0.005	0	33
Water	2.26	0.04	< 0.005	0	3.51
Solid Waste	0.57	0.06	0	0	2
Refrigerants	0	0	0	0.22	0.22
Stationary	6.58	< 0.005	< 0.005	0	6.6
Vegetation	4.94	0	0	0	4.94
Amortized Construction Emissions	21.5	< 0.005	< 0.005	< 0.001	21.6
Total	**90.03**	**< 0.13**	**< 0.03**	**< 0.26**	**93.7**

Source: CalEEMod, 2025. Note: Totals may not add due to rounding.

As indicated in **Table 4.8-4**, the project's GHG emissions are negligible in comparison to the referenced numerical threshold of 1,100 MT/year CO_2e. The highest levels of GHG emissions are anticipated to be generated by mobile sources, stationary sources, and energy use.

Electricity for the project would be provided by PacificCorp. As stated under Regulatory Context, the new standards established by SB 100 (2018) require 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045 for both investor-owned utilities and publicly owned utilities, resulting in a corresponding decrease in indirect GHG emissions. Although an increase in energy use would occur, the energy use associated with the proposed project would not be wasteful or significant.

Further, as documented in Section 4.17 (Transportation), the project does not include any components that would significantly increase vehicle miles traveled (VMT) or result in significant mobile source emissions over existing levels.

As documented above, the proposed project's impacts associated with GHG emissions would be ***less than significant.***

Question B

See discussions under Regulatory Context and Question A above. There are no adopted local plans associated with GHG emissions. The City would ensure compliance with applicable State regulations adopted for the purpose of reducing GHG emissions through contractual obligations. Therefore, the proposed project would not conflict with a plan, policy, or regulation adopted for the purpose of reducing GHG emissions; there would be ***no impact***.

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, and these regulations apply to all development projects in the State. As documented above, the project's GHG emissions would not exceed the numerical threshold of 1,100 metric tons/year CO_2e, and would not result in a significant increase in GHG emissions. Therefore, the project's contribution to cumulative GHG emissions would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Air Resources Board (CARB). 2023. In-Use Off-Road Diesel-Fueled Fleets, Final Regulation Order(Rulemaking Website). https://ww2.arb.ca.gov/rulemaking/2022/off-roaddiesel. Accessed January 2025.

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4.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan 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?	☐	☐	☐	☒
f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

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 Clean Air Act (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 with a safe working environment. OSHA regulations apply to the workplace 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 is 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

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.

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 (SRAs) in November 2007. Pursuant to California Government Code §51175-51189, CAL FIRE also recommended FHSZs for Local Responsibility Areas (LRAs). 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.

Regional Water Quality Control Board (RWQCB)

The State Water Resources Control Board (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 RWQCBs 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 Central Valley RWQCB (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 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 an RMP 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 Fire Code

Chapter 33 of the CFC (Fire Safety During Construction and Demolition) includes minimum safeguards that must be implemented during construction, alteration, and demolition activities to protect adjacent properties and structures from fire. Requirements are provided for cutting and welding activities, storage of flammable and combustible materials, blasting operations, and other construction-related activities. Vehicle access to the construction site for fire department personnel must be provided by either temporary or permanent roads capable of supporting vehicle loading under all weather conditions.

California Building Standards Code

California Building Code Chapter 7A (Materials and Construction Methods for Exterior Wildfire Exposure) includes standards for new construction in Wildland-Urban Interface (WUI) Fire Areas. A WUI includes areas in State Responsibility Areas (SRA) that are designated Very High, High, or Moderate fire hazard severity zones (FHSZs); and areas within a Local Responsibility Area (LRA) that are designated as Very High FHSZs. The purpose of Chapter 7A 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

City of Mt. Shasta General Plan, Safety Element

The City of Mt. Shasta's General Plan includes the following Goals, Policies, and Implementation Measure (IM) that apply to the proposed project:

City of Mt. Shasta General Plan – Safety Element		
Goals	SF-4	Protect property and life from fire hazards.
	SF-5	Protect people and the environment from hazardous materials exposure.
Policies	SF-4.2	Adopt and enforce development standards that provide adequate fire protection.
	SF-5.1	Assure that the use, storage and transportation of hazardous materials complies with federal and state regulations.

IM	SF-5.1(a)	Working with the State Department of Health and the County Health Department, enforce the applicable provisions of State law related to hazardous material storage.

DISCUSSION OF IMPACTS

Questions A and B

The project would not result in any long-term impacts related to the transport, use, or disposal 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 are required to comply with applicable federal and state environmental and workplace safety laws. Additionally, construction contractors are required to implement Best Management Practices (BMPs) for the storage, use, and transportation of hazardous materials. Therefore, impacts would be ***less than significant***.

Question C

According to the Siskiyou County Office of Education (SCOE), there are no schools within a 1/4-mile radius of the project. The nearest school is Mt. Shasta High School on Everitt Memorial Highway which is over ~0.65 miles southeast of the waterline improvements on Ski Village Drive (SCOE, n.d.). Therefore, there would be ***no impact.***

Question D

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

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

The records search revealed that the project is not located on a hazardous waste site. There are no active clean-up sites or hazardous waste sites on or adjacent to the project site (California Environmental Protection Agency, n.d.). The nearest active clean-up site is the Red-Dye Fuel Release of Unknown Origin located in the alley between E. Ivy Street and E. Jessie Street, ~0.65 miles south of the project (SWRCB, n.d.). Due to the distance between the project area and the clean-up site there would be ***no impact***.

Question E

According to the Federal Aviation Administration (FAA), the Dunsmuir Municipal-Mott Airport is the nearest airport to the project area (FAA, n.d.); the airport is approximately ~4.7 miles southeast of the project site. According to the Siskiyou County Airport Land Use Compatibility Plan, the project area is not located within an airport influence area (Siskiyou County, 2001). According to the FAA, the project site is not located in the vicinity of a private airstrip. Therefore, there would be ***no impact***.

Question F

The City of Mt. Shasta is located in the operational area of the Siskiyou County Office of Emergency Services (Siskiyou County, 2025). According to the Safety Element of the City's General Plan, local response to daily emergencies and local emergency management is conducted under the direction of the City of Mt. Shasta Fire and Police Departments, Siskiyou County Sheriff's Office, and Mt. Shasta

Fire Protection District (City of Mt. Shasta, 2007). I-5/Volcanic Legacy Scenic Byway in the project vicinity serves as a major evacuation route for the public and provides emergency access for firefighters, law enforcement, and other emergency responders. Additional roads that would serve as primary evacuation routes include Mt. Shasta Boulevard, Spring Hill Road, Everitt Memorial Highway, and Old Stage Road.

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.

Pursuant to Cal/OSHA requirements, temporary traffic control during completion of activities that require work in the public ROW is required and must adhere to the procedures, methods and guidance given in the current edition of the California Manual on Uniform Traffic Control Devices (MUTCD) (Caltrans, 2025). Specific requirements for traffic safety measures (i.e., signs, cones, flaggers, etc.) would be included in the City's contract documents. These requirements ensure that impacts would be ***less than significant***.

Question G

The two new water tanks and appurtenant utility improvements are located within a Very High Fire Hazard Severity Zone (FHSZ) in a State Responsibility Area (SRA); the new well building and waterline improvements in Ski Village Drive and North Mt. Shasta Boulevard are located within a Very High FHSZ in a Local Responsibility Area (LRA) (CAL FIRE, 2024). Therefore, as described under Regulatory Context, the project is subject to CFC and CBC requirements to minimize damage or loss due to wildland fires.

Equipment used during construction activities, including power tools and acetylene torches, may create sparks that could ignite dry grass. Because the project is located in a Very High FHSZ, construction activities are subject to the PRC wildfire measures and State Fire Code regulations that identify minimum safeguards that must be implemented during construction, alteration, and demolition activities to protect life and property from fire. In the long term, the project would have a beneficial effect by increasing water storage capacity and improving fire flows, which would improve the ability to fight wildfires in the area. Therefore, impacts would be ***less than significant***.

CUMULATIVE IMPACTS

As documented above, the proposed project would not result in a significant increase in long-term risks associated with hazards or hazardous materials. The transport, use, and disposal of hazardous chemicals by the project and cumulative projects would be conducted in accordance with existing regulations, and steps must be taken during construction to minimize wildfire risks.

Construction would be in conformance with the applicable California building and fire codes. Because the proposed project and cumulative projects are required to implement measures to reduce the potential for adverse impacts associated with hazards and hazardous materials, including wildfire, the proposed project's cumulative impacts would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

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California State Water Resources Control Board (SWRCB). n.d. Geotracker: Red-Dye Release of Unknown Origin (T10000012166) https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000012166. Accessed February 2025.

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Siskiyou County. 2025. Draft Siskiyou County Local Hazard Mitigation Plan Update. https://www.co.siskiyou.ca.us/emergencyservices/page/local-hazard-mitigation-plan. Accessed February 2025.

_____. 2001. Airport Land Use Compatibility Map. https://static1.squarespace.com/static/54c9a764e4b0ee5502d31f04/t/5611ff3de4b0890ee930ae5d/1444020029221/20151001120556.pdf. Accessed February 2025.

Siskiyou County Office of Education (SCOE). 2024. Siskiyou County Schools. https://www.siskiyoucoe.net/schools. Accessed February 2025.

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

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 National Pollutant Discharge Elimination System (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 State Water Resources Control Board (SWRCB) and is discussed in detail below.

4. Section 404, jointly administered by the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (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 (NPDES)

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 Regional Water Quality Control Boards (RWQCBs) enforce waste discharge requirements identified in the Report.

The State has numerous programs that address groundwater quality, including the Land Disposal Program, which regulates the discharge to land of certain solid and liquid wastes; the Irrigated Lands Program, which regulates discharges from irrigated agricultural lands; and the Drinking Water Source Assessment and Protection Program, which addresses both groundwater and surface water sources and includes State's wellhead protection program.

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 (NPDES)

Pursuant to the federal CWA, the responsibility for issuing NPDES permits and enforcing the NPDES program was delegated to the SWRCB and the nine RWQCBs. NPDES permits are also referred to as waste discharge requirements (WDRs) that regulate discharges to waters of the U.S. 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. 2022-0057-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 Best Management Practices (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 Municipal Separate Storm Sewer System (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 Stormwater Multiple Application and Report Tracking System (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 Central Valley RWQCB (CVRWQCB) Order R5-2022-0006 (NPDES No. CAG995002), *Waste Discharge Requirements, Limited Threat Discharges to Surface Water*, as amended. WDRs for this order include discharge prohibitions, receiving water limitations, monitoring, and reporting, etc. Coverage is obtained by submitting a NOI to the applicable RWQCB.

Dewatering Activities (Discharges to Land)

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

Water Quality Control Plans (Basin Plans)

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

Groundwater Ambient Monitoring and Assessment (GAMA) Program

The GAMA program includes a publicly accessible Groundwater Information System that integrates and displays water quality data from various sources on an interactive Google-based map: https://www.waterboards.ca.gov/water_issues/programs/gama/gama-gis.html. The GAMA GIS contains approximately 78 million standardized analytical results from over 282,000 wells throughout the State. Data is compiled from multiple sources and includes well chemical data and depth to water measurements. Improvements and additions are continually added as system needs change.

LOCAL

City of Mt. Shasta General Plan, Open Space and Conservation Element and Safety Element

The City's General Plan includes the following Goals, Policies, and Implementation Measures (IMs) that apply to the proposed project:

City of Mt. Shasta General Plan – Open Space and Conservation Element		
Goal	OC-10	Protect the drinking water of Mt. Shasta residents.
Policies	OC-10.1	Maintain a safe drinking water supply.
	OC-10.2	Protect the City's drinking water sources from contamination.
IMs	OC-10.1(a)	Comply with drinking water standards.
	OC-10.2(a)	When reviewing development proposals for projects with the potential to contaminate drinking water supplies, ensure that the environmental and project review process incorporates appropriate measures to avoid drinking water contamination.
City of Mt. Shasta General Plan – Safety Element		
Goal	SF-1	Protect people and property from flooding.
Policy	SF-1.1	Identify areas subject to inundation.
IM	SF-1.1(a)	Require that the limits of flooding resulting from a one hundred-year storm event be shown on all permit site plans where lands may be subject to inundation.

Siskiyou County

The Siskiyou County Environmental Health Department (EHD) has permit authority over all domestic and production wells in the County. Requirements for wells are included in Siskiyou County Code Title 5, Chapter 8 (Standards for Wells) (Siskiyou County, 1990). The purpose of the Code is to protect the health, safety, and general welfare of the people of the State by ensuring that the groundwater will not be polluted or contaminated. The County Code incorporates Department of Water Resources Bulletin 74-81, Water Well Standards. The State identifies standards for monitoring wells for observation of groundwater

levels and flow conditions, sampling for groundwater quality, and for evaluating hydraulic properties of water-bearing strata.

DISCUSSION OF IMPACTS

Question A

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, the SWRCB Construction General Permit requires implementation of a SWPPP that includes BMPs to control construction-related erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat. The City is not subject to a SUSWMP or MS4 permit; therefore, 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.

Because construction and post-construction BMPs for erosion and sediment control would be implemented in accordance with the SWRCB Construction General Permit, and the City will monitor the new well in accordance with State and local requirements to identify potential issues with water quality, the project would not violate any water quality standards or WDRs or significantly degrade surface or groundwater quality. Therefore, impacts would be ***less than significant***.

Question B

DWR states that areas that are not identified as groundwater basins include areas that consist of impermeable granitic, metamorphic, volcanic, or consolidated rocks (carbonates), with groundwater stored within fractures or other voids. The connectivity of these fractured rock systems is often limited and difficult to predict and characterize. Approximately 60 percent of land in California is in a non-basin area (DWR, 2021).

The City of Mt. Shasta and surrounding areas are considered non-basin areas; therefore, the project is not subject to the SGMA, and there is not a Groundwater Sustainability Plan that applies to the project.

The City obtains its existing water supply from Cold Springs based on a pre-1914 appropriation water right that allows withdrawal of 100 percent of the Cold Springs yield in perpetuity for municipal purposes (PACE, 2011). Cold Springs is located about two miles east of the City near the eastern end of McCloud Avenue. The Cold Springs primary supply is supplemented by two groundwater sources: Well No. 1, which is located on Washington Drive just south of the Lake Street intersection, and Well No. 2 located on Mt. Shasta High School property north of Rockfellow Drive.

Hydrogeologic Setting

The City is located on the flanks of Mount Shasta, a stratovolcano in the Cascade Ranges Geomorphic Province. Volcanic activity has occurred for at least 590,000 years, but the ancestral cone was destroyed in a major collapse and landslide ~300,000 years ago. The current cone of Mount Shasta has developed over the last 250,000 years. Eruptions within the last 10,000 years produced lava flows and domes on and around the flanks of Mount Shasta, and pyroclastic flows from summit and flank vents extend as far as 12 miles from the summit (USGS, 2023). Volcanic eruptions formed aquifers that store large quantities of groundwater.

There are two aquifer systems in the vicinity of the proposed Spring Hill Road Well and the existing DEX-6: a glacial-fluvial sedimentary aquifer system (Upper Aquifer) and a fractured andesitic bedrock aquifer system (Lower Aquifer). The Lower Aquifer is hydraulically connected to the aquifer from which Big Springs flows.

Existing DEX-6 Well

Drilling of the borehole for DEX-6 was conducted in late 1997 to a depth of 294 feet BGS. Groundwater was encountered at a depth of 198 ft BGS, where a prominent zone of fractures occurred. The borehole was converted into a production well at that time.

DEX-6 was previously used as the main production well for the Dannon bottling facility from January 2001 until some point in 2010. Dannon reported using ~160 GPM on a monthly average basis (~230,400 gallons per day [GPD]). Crystal Geyser (CG) acquired the well and property in 2013 with the intention of renovating and reopening the bottling facility. CG proposed an annualized average pumping rate of ~217,000 GPD at full production capacity; however, the project did not move forward, and CG sold the property, including the well, to One Shasta LLC in April 2022.

It should be noted that deed restrictions on the property state that *"no portion of the property shall be used for the manufacture, assembly, distribution, sale, and/or transportation of water beverage products."* The deed identifies the DEX-6 site as being subject to the deed restrictions.

According to PACE Engineering, water demand for near-term potential development in the City's water service area would be ~50,000 GPD. Because this is significantly less than proposed for the CG facility, it is logical to conclude that impacts from use of the DEX-6 well for municipal purposes would be less than identified in hydrogeological studies completed for the CG facility

A relatively large amount of geologic and hydrogeologic data related to the project area is available. As stated in the Final Environmental Impact Report (FEIR) prepared for the previously proposed CG facility in 2017 (State Clearinghouse Number 2016062056), *"A bottling plant was in operation within the project site for approximately 10 years, between 2001 and 2010, and groundwater levels, pumping rates and precipitation data exist for this period of operation (pumping data exists between 2006 and 2010)…The data effectively provides a 10-year operational aquifer test with pumping from the same well (DEX-6) at rates comparable to those currently being proposed* [by CG]. *Based on actual data collected over many years, it is possible to make confident and accurate estimates of the effects of the proposed pumping on groundwater levels"* (Siskiyou County, 2016).

Previous studies conducted on the DEX-6 well include a Hydrogeologic Evaluation prepared by Richard Slade and Associates LLC (RCS) in October 2016 (**Appendix C**). Additional information supporting the results of the hydrogeological evaluations prepared for DEX-6 is included in **Appendix C**. This includes a Technical Memorandum (Analysis of Groundwater Level Data) dated June 6, 2017, prepared by CH2M; a Technical Memorandum (Responses to Public Comments on the CGWC Draft EIR) dated June 7, 2017, prepared by Geosyntec Consultants and CH2M; and a Memorandum outlining a peer review of the Geosyntec and CH2M Responses to Comments prepared by RCS dated July 7, 2017.

Effects of Pumping in DEX-6 on Neighboring Wells and Big Springs

The 2016 RCS Hydrogeologic Evaluation (see **Appendix C**) included an analysis of effects of pumping in DEX-6 on neighboring wells and concluded that pumping to supply a total demand of 116,000 GPD would result in a theoretical water level drawdown in neighboring wells ranging between 0.09 and 0.30 feet, depending on pumping conditions. The RCS study also concluded that the theoretical impact on water levels at Big Springs to supply 116,000 GPD would be only a few tenths of a foot (0.22 feet).

The 2017 Technical Memorandum (Analysis of Groundwater Level Data) prepared by CH2M (see **Appendix C**) also includes an analysis of effects of pumping in DEX-6 on neighboring wells. As stated by CH2M, the drawdown in a pumping well is greater than would occur anywhere else in the aquifer. This is the case irrespective of aquifer thickness, extent, hydraulic properties, source of recharge, amount of water in storage, degree of connection between different aquifers, direction of groundwater flow, or any other possible hydrogeologic variables. Nowhere in the aquifer is the drawdown associated with pumping greater than in the pumping well itself.

CH2M concluded that the average daily drawdown caused by pumping in DEX-6 to produce ~216,788 GPD would be no more than 0.75 feet anywhere in the aquifer. The CH2M report further states that most, if not all, of the neighboring wells are screened in the upper aquifer, which is poorly connected to the lower aquifer; therefore, the effect of pumping in DEX-6 will likely not be measurable at the neighboring wells.

According to PACE Engineering, water demand for near-term potential development in the area would be ~50,000 GPD; at this pumping rate the effects of drawdown in neighboring wells and Big Springs would be even less than identified for the previously proposed CG project.

New Spring Hill Road Well

Lawrence & Associates (L&A) conducted an evaluation of three potential well sites in the City in February 2019 (**Appendix D**). The purpose of the evaluation was to identify the hydrogeologic setting of each of the three potential sites.

After review of data presented for the three potential well sites, the City decided to proceed with a test well at the proposed Spring Hill Road location. The aquifer test was completed on September 22, 2021.

The study states that a well at the proposed location on Spring Hill Road would produce water from both the clastic materials (Upper Aquifer) and fractured andesite (Lower Aquifer). The report concluded that in consideration of groundwater quality protection, it would be beneficial to screen a well at this location solely in the Lower Aquifer because of the high permeability of the overlying clastic materials.

According to L&A, the test well was pumped at 350 GPM, and the well sustained that rate for 4.5 hours. As the water level dropped below ~250 feet, there were significant changes in the rate of drawdown. When the water level dropped below ~280 feet, the drawdown curve steepened dramatically.

Based on these results, it appears that the productive zone in this location is the gravel unit between approximately 160 and 250 feet below ground surface (BGS). The static water level is ~150 feet BGS, which gives an available drawdown of ~100 feet (although L&S recommends that it is better practice to assume only 75 percent of the available drawdown can be used, as a factor of safety). L&A concluded that if 100 feet is used as the available drawdown, a larger (24-inch) well in this location could sustain a pumping rate of 200 GPM for a period of 90 to 180 days. Higher rates would be possible for shorter periods of time (e.g., a 24-inch well could sustain a rate of 350 GPM for 1 day).

The L&A report states that a well at the Spring Hill site may or may not be hydraulically upgradient of Big Springs. As shown in Figure 3 of the L&A report (**Appendix D**), placing a well closer to Spring Hill Road would be less likely to be directly upgradient of Big Springs, which would minimize potential impacts to the Springs. The L&A report states that based on May 2010 groundwater quality testing in the nearest well, ~500 feet to the north, the groundwater quality at the Spring Hill Road site is expected to be good.

City's Historic and Anticipated Groundwater Demand

Table 4.10-1 shows water consumption in the City between 2019-2023 and identifies how much of this total was from groundwater pumped from the City's two existing wells. As indicated in **Table 4.10-1**, the City's two wells provide a very small percentage of the City's total water consumption.

Table 4.10-1
City of Mt. Shasta Water Consumption and Groundwater Produced, 2019-2023

	Water Consumption (Million Gallons)				
Month	**2019**	**2020**	**2021**	**2022**	**2023**
January					
Total Consumption	11.7	11.0	10.3	10.3	12.0
Groundwater Portion	0	0.188	0.178	0	0
February					
Total Consumption	9.7	10.1	13.2	10.7	11.4
Groundwater Portion	0	0.319	0.113	0.049	0
March					
Total Consumption	10.3	11.4	11.9	12.0	11.7
Groundwater Portion	0	0.165	0.051	0	0
April					
Total Consumption	12.7	16.2	19.6	13.8	10.9
Groundwater Portion	0	0.301	0.045	0	0
May					
Total Consumption	24.2	26.2	30.3	19.2	21.6
Groundwater Portion	0	1.991	2.305	0.622	0
June					
Total Consumption	33.2	38.2	46.9	34.6	33.9
Groundwater Portion	0	1.629	8.777	3.339	0
July					
Total Consumption	47.6	47.7	44.4	33.0	39.6
Groundwater Portion	3.60	2.792	8.286	3.426	0.448
August					
Total Consumption	41.3	46.9	39.3	39.2	43.6
Groundwater Portion	1.417	3.544	1.483	2.576	0.165
September					
Total Consumption	33.1	43.1	39.4	31.3	29.7
Groundwater Portion	0.387	3.725	0.785	1.23	0.098
October					
Total Consumption	18.0	29.8	18.7	25.0	21.3
Groundwater Portion	0.305	1.062	0	0.174	0
November					
Total Consumption	13.2	13.2	10.2	13.2	12.1
Groundwater Portion	0.204	2.56	0	0.024	0
December					
Total Consumption	9.9	11.6	11.9	11.2	9.9
Groundwater Portion	0.389	0.346	0	0	0
Total Annual Consumption	264.9	305.4	296.1	253.5	257.7
Annual Groundwater	5.913	18.276	22.023	11.4	0.711
Groundwater as Percentage of Total	2.23%	5.98%	7.44%	4.51%	0.28%

The new well would result in an increase in groundwater pumping above the City's existing conditions. However, pumping would not be continuous over a 24-hour period; rather than continuously pumping at the high rate that was done for the test well, the well would pump until the new tank was full and then shut down. When the tank was drained below a certain level, the pump would re-start until the tank was re-filled. Supervisory control and data acquisition (SCADA) equipment would be installed at the well and water tanks, which would allow the City to remotely monitor and control the well and tanks. The City's SCADA system also monitors Cold Springs flows, the existing water tanks, and the existing wells.

As stated in Section 3.1 (Project Background, Need, and Objectives), the City obtains its normal water supply from Cold Springs, based on a pre-1914 appropriation water right that allows withdrawal of 100 percent of the Cold Springs yield, which is about 2.8 MGD (Grant Maxwell, personal conversation, May 8, 2025). Groundwater pumping rates for the new well are anticipated to be similar to the existing wells in the foreseeable future.

According to PACE Engineering, water demand for near-term potential development in the area would be ~50,000 GPD; however, at what point the increased water demand from the new well would reach 50,000 GPD is speculative.

As stated in Section 4.14 (Population and Housing), the City has witnessed a decline in population over the past 15 years. Between 2010 and 2020, the population of the City of Mt. Shasta decreased by 4.4 percent, from 3,394 in 2010 to 3,223 in 2020, with an average annual decrease of 1.7 percent (City of Mt. Shasta, 2024). According to the California Department of Finance (DOF), the City's population as of January 1, 2025, was 3,179 (DOF, 2025), which is less that the population in 2010 when the Master Water Plan was prepared.

The City's Housing Element also states that Siskiyou County's population, as a whole, declined; the Countywide population in 2010 was 44,855, and the population in 2020 was 43,792 (City of Mt. Shasta, 2024). According to the DOF, the County's population as of January 1, 2025, was 43,311 (DOF, 2025). The DOF also provides population projections for Counties through 2060. The DOF projects that Siskiyou County's population will continue to decline through to 2060, with an average annual decrease of 1.43 percent.

Even with a new well, the City's primary water supply would continue to be Cold Springs, and it is not likely that water demands will significantly increase in the foreseeable future to the extent that the City would need to increase groundwater production. Therefore, in the foreseeable future, the new groundwater source and water tanks would be primarily for increasing fire flows and storage in compliance with State standards.

Groundwater Recharge

Groundwater recharge to the aquifer system is generally from infiltration of direct precipitation on the land surface and from infiltration of surface water runoff along local streams and creeks. The recharge area for the aquifer that feeds Big Springs and DEX-6, and would feed the proposed Spring Hill Road well, includes higher areas on Mount Shasta where snow is present much of the year.

Recharge occurs both during the rainy season and also during warm months when the snowpack melts. Water from melted snow percolates down through porous volcanic rocks and flows subsurface, eventually emerging as springs and seeps on the valley floor. The recharge area for the aquifer system underlying the project area is estimated to be approximately 7.2 square miles (RCS, 2016); however, due to the complexity of the volcanic bedrock geology, the recharge area may be even larger.

Groundwater recharge can be impeded by activities that increase impervious surfacing (e.g., structures and pavement) and from the loss/compaction of topsoil, which can reduce water infiltration into the soil.

Construction of the new well, well building, two water storage tanks, and paved areas would result in an increase in impervious surface of ~0.5 acres, which would decrease the area available for groundwater recharge. The project's increase in impervious surface represents a small percentage of

the entire surface area of the recharge area. Runoff would be directed to areas with pervious surfaces, and undeveloped land surrounding the project area would remain available for groundwater recharge.

Conclusion

As documented above, previous hydrogeologic reports, based on past pumping of DEX-6, demonstrate that the well would not adversely impact groundwater supplies or Big Springs. Therefore, it is logical to conclude that impacts from use of the DEX-6 well for municipal purposes at an anticipated pumping rate of 50,000 GPD would be less than identified in hydrogeological studies completed for the CG facility. As documented above, a new well adjacent to Spring Hill Road as proposed is not anticipated to adversely impact existing wells in the area and would be less likely to be directly upgradient of Big Springs, which would minimize potential impacts to the Springs. Further, the project's increase in impervious surface represents a small percentage of the entire surface area of the recharge area.

Therefore, the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge; impacts would be ***less than significant***.

Question C

Storm drainage facilities within the project area consists primarily of surface drainage features such as natural waterways, man-made ditches, and/or remnants of natural watercourses.

The project does not include any components that would alter the course of a stream or river. As stated under Question B, the project would add ~0.5 acres of impervious surface, which would increase runoff from the site above existing conditions. As stated in Section 3.0 (Project Description), a new stormdrain pipe would be installed from the water tanks, south to Ski Village Drive, where it would discharge into an existing well-developed drainage ditch. This will ensure that any overflow water from the tanks does not lead to increased erosion or siltation. Any such discharge would be infrequent, and any significant discharge, such as from drawdown of the tank for maintenance purposes, would be controlled to prevent adverse effects.

The SWRCB Construction General Permit requires implementation of a SWPPP that includes BMPs to control construction-related runoff and erosion to prevent damage to streams, watercourses, and aquatic habitat. The proposed project is also subject to post-construction requirements included in the SWRCB Construction General Permit to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect impacts from stormwater runoff (i.e., pollution and/or hydromodification) upstream or downstream.

Implementation of BMPs and post-construction measures, and completion of the proposed drainage improvements ensures that the project would not alter drainage patterns in the area in a manner that would result in increased surface runoff, flooding on- or off-site, or otherwise degrade water quality; impacts would be ***less than significant.***

Question D

A tsunami is a wave generated in a body of water (typically the ocean) by fault displacement or major ground movement. The project site is located over 90 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. The closest large body of water to the project site is Lake Siskiyou, approximately ~2.7 miles to the southwest. The project is located ~400 feet higher in elevation than Lake Siskiyou. Seiches could potentially be generated in Lake Siskiyou due to very strong ground-shaking; however, due to the elevation difference and distance from the project site, the project site has no potential for inundation by seiche. According to the FEMA Flood Map Service Center (Panel 06093C3025D, effective January 19, 2011), the project site is not located within a designated flood hazard zone (FEMA, n.d.).

Therefore, there would be ***no impact*** associated with the potential for release of pollutants due to inundation by seiche, tsunami, or flood.

Question E

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 DWR 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 project proposed (DWR, 2024a, 2024b). Therefore, the project would have ***no impact*** on a water quality control plan or sustainable groundwater management plan.

CUMULATIVE IMPACTS

The proposed project and other potential cumulative projects in the region, including growth resulting from build-out of the City's and County's General Plans, could result in degradation of water quality, adverse impacts related to groundwater supply and 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 Construction General permit which requires implementation of a SWPPP that includes BMPs to reduce pollutants and any additional controls necessary to meet water quality standards.

In addition, 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 upstream or downstream.

The City's primary water supply is from Cold Springs. Although the City's water supply is supplemented by groundwater, and the new well would increase groundwater pumping, the primary purpose of the project is to increase fire flows and storage to meet State standards. State and local population projections show that no increase in population that could significantly increase the demand for groundwater pumping is expected over the next 20+ years. Therefore, the project's contribution to cumulative impacts related to hydrology and water quality would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

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Siskiyou County. 1990. Siskiyou County Code Title 5, Chapter 8 (Standards for Wells). https://library.municode.com/ca/siskiyou_county/codes/code_of_ordinances?nodeId=TIT5SAHE_CH8STWE. Accessed May 2025)

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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?	☐	☐	☐	☒
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?	☐	☒	☐	☐

REGULATORY CONTEXT

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

STATE

California Government Code (CGC)

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

City of Mt. Shasta

The City's General Plan includes goals, policies, and implementation measures designed for the purpose of avoiding or minimizing environmental effects. The Mt. Shasta Municipal Code implements the City's General Plan. The purpose of the land use and planning provisions of the Code (Title 18, 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 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 would not 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 Goals, Policies, and Implementation Measures of the City of Mt. Shasta General Plan and regulations of the regulatory agencies identified in Section 1.8 of this Initial Study. Where necessary, mitigation measures are included to reduce impacts to less than significant levels. Therefore, with implementation of the Mitigation Measures identified in Section 1.10, the proposed project would not conflict with any plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect; impacts would be ***less than significant***.

CUMULATIVE IMPACTS

Cumulative projects in the vicinity of the project area, including population growth resulting from build-out of the City's General Plans, 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 Goals, Policies, and Implementation Measures included in the City's General Plan, and would not contribute to the potential for adverse cumulative land use effects.

MITIGATION

Implementation of the Mitigation Measures Identified in Section 1.10 (Summary of Mitigation measures).

DOCUMENTATION

City of Mt. Shasta. 2024. Mt. Shasta Municipal Code. Title 18, Zoning. http://www.codepublishing.com/CA/MtShasta/. Accessed January 2025.

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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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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, 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 Department of Conservation (DOC), 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 MRZs indicate the potential for an area to contain significant mineral resources.

DISCUSSION OF IMPACTS

Questions A and B

According to the DOC, there are no designated MRZs in the project area (DOC, n.d.a). According to the DOC, Division of Mine Reclamation, there are two active mines within a one-mile radius of the project area. The Springhill Mine is a sand and gravel quarry located within the City limits, approximately 0.6 miles northeast of the new well site. Mt. Shasta Pit is an active sand and gravel quarry located outside the City limits, approximately ~0.6 miles west of the waterline improvements on North Mt. Shasta Boulevard (DOC, n.d.b). Due to the distance from the project area, the project would have no impact on existing mining operations.

Siskiyou County does not identify the mining of natural mineral resources as an allowable or conditional use in any specific zoning district; rather, the County considers proposed mining applications on a case-by-case basis, taking into consideration compatibility of mining operations with surrounding uses and potential impacts from noise, dust, odors, and hazards. The City's Zoning Code allows mineral resource extraction and production as a conditional use in the Resource Lands (R-L) zone district. According to the City's Zoning Map, there are presently no lands in the City limits that are zoned R-L (City of Mt. Shasta, 2024). Therefore, the proposed project would not result in the loss of availability of a locally important mineral resource.

Because there are no active mining operations near the project sites, no known significant mineral deposits have been designated in the area, and no nearby lands are designated or zoned for mineral extraction activities, the project would have ***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 (DOC). n.d.a California Geological Survey. Mineral Land Classification Maps. https://maps.conservation.ca.gov/cgs/minerals/?page=All-Data. Accessed April 2025.

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City of Mt. Shasta. 2024. Mt. Shasta Municipal Code Title 18, Zoning, Chapter 18.16, District Regulations (Resource Lands [R-L]). https://www.codepublishing.com/CA/MtShasta/#!/MtShasta18/MtShasta18.html. Accessed January 2025.

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?	☐	☒	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan 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?	☐	☐	☐	☒

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 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.

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. Depending on the type of construction, interior noise levels are about 10-15 dBA lower than exterior levels with the windows partially open, and approximately 20-25 decibels lower than exterior noise levels with the windows closed.

REGULATORY CONTEXT

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

STATE

California Government Code §65302(f)

California Government Code §65302(f) requires a Noise Element to be included in all city and county General Plans. The Noise Element must identify and appraise major noise sources in the community (e.g., highways and freeways, airports, railroad operations, local industrial plants, etc.). A noise contour diagram depicting major noise sources must be prepared and used as a guide for establishing land use patterns to minimize the exposure of residents to excessive noise. The Noise Element must include implementation measures and possible solutions that address existing and foreseeable noise levels.

LOCAL

City of Mt. Shasta General Plan, Noise Element

The City's General Plan includes the following Goal, Policies, and Implementation Measures (IMs) that apply to the proposed project:

City of Mt. Shasta General Plan – Noise Element		
Goal	NZ-1	Protect City residents from the harmful and annoying effects of exposure to excessive noise.
Policies	NZ-1.1	Enforce standards for noise exposure from proposed and existing non-transportation noise sources. The General Plan Noise Standards for the City of Mt. Shasta for new uses affected by non-transportation noise sources are shown on Table 7-5 [of the General Plan Noise Element]. The standards of Table 7-5 shall be applied to both new noise-sensitive land uses and new noise-generating uses, with the responsibility for noise attenuation placed on the new use. For example, if a developer proposes construction of a new apartment complex near an existing industry, the developer would be responsible for including appropriate noise attenuation in the project design to achieve compliance with the standards of Table 7-5 at the new apartments. Conversely, if a new industry was proposed near an existing apartment complex, the industry would be responsible for including appropriate noise attenuation in the project design to achieve compliance with the Table 7-5 standards at the existing apartment building.
	NZ-1.2	Review impacts more closely when a project is potentially a high noise generator.
	NZ-1.3	Emergency service and agriculture uses shall be allowed to continue or be initiated even if noise standards are exceeded.
	NZ-1.4	Enforce General Plan noise standards for noise exposure from proposed and existing transportation noise sources. The General Plan Noise Standards for the City of Mt. Shasta for new uses affected by transportation noise sources are shown on Table 7-6 [of the Noise Element]. Where the noise level standards of Table 7-6 are expected to be exceeded at proposed new uses that would be affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to comply with the standards of Table 7-6.
	NZ-1.5	Actively work to reduce noise generated by City equipment.
	NZ-1.6	The City Development Code shall include procedures to ensure that required noise review and mitigation measures are implemented in the project review and building permit processes.
	NZ-1.7	Noise attenuation measures required to achieve acceptable noise standards shall emphasize site planning and project design.
	NZ-1.8	Monitor compliance with noise standards.
IMs	NZ-1.1(b)	When noise levels due to non-transportation noise sources exceed acceptable noise level standards as indicated in Table 7-5, noise mitigation measures shall be required to comply with the standards.
	NZ-1.1(c)	Noise created by new proposed non-transportation noise sources shall not exceed the noise level standards indicated in Table 7-5 at the property line.

NZ-1.2(a)	Proposed non-residential land uses that are likely to produce noise levels exceeding the acceptable noise standards at existing or planned noise sensitive uses shall require an acoustical analysis as part of the application review process to ensure that methods of achieving noise standards are included in project design.
NZ-1.3(a)	Noise sources associated with agricultural operations (on lands zoned for such uses) emergency equipment are exempt from noise standards.
NZ-1.4(a)	Evaluate transportation noise sources of proposed projects according to the noise level standards shown in Table 7-6.
NZ-1.4(b)	Using acceptable acoustical engineering and construction standards, incorporate design features to reduce traffic noise to achieve the noise standards shown in Table 7-6.
NZ-1.4(c)	Noise created by new transportation noise sources, including roadway improvements, shall be mitigated to comply with the noise level standards shown in Table 7-6.
NZ-1.5(a)	When purchasing new equipment, the City shall acquire equipment and vehicles that comply with noise level performance standards based upon the best feasible noise reduction technology.
NZ-1.6(a)	Proposed noise-sensitive land uses in areas exposed to existing or projected exterior noise levels, which exceed acceptable noise standards, shall require an acoustical analysis as part of the environmental review process so that noise mitigation may be included in the project design. When an acoustical analysis is required by the City to assess compliance with the City's Noise Element standards, the analysis shall follow the guidelines of Table 7-7 [of the General Plan Noise Element].
NZ-1.7(a)	Use creative concepts and accepted acoustical engineering standards to achieve acceptable noise standards.
NZ-1.7(b)	The use of noise barriers, such as soundwalls, shall be considered a supplemental means of achieving the noise standards after all practical design-related noise mitigation measures have been integrated into the project. When soundwalls and noise barriers are proposed, the City will consider the visual impacts in addition to their effectiveness in attenuating noise.
NZ-1.8(a)	Develop and employ procedures to monitor compliance with the standards of the Noise Element after completion of projects where noise mitigation measures were required.
NZ-1.8(b)	Building design shall be reviewed to enforce the State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code (UBC).
NZ-1.8(c)	Noise associated with construction activity between the hours of 7 a.m. and 5 p.m. shall be exempt from the standards cited in Table 7-5 [Noise Standards for New Uses Affected by Non-Transportation Noise]. Construction activity outside of this period may exceed the cited standards if an exemption is granted by the City to cover special circumstances.

Tables 7-5 and 7-6 of the General Plan Noise Element are reproduced below as Tables 4.13-1 and 4.13-2, respectively. Table 7-7 can be accessed in Appendix D (Environmental Noise Analysis) of the General Plan Noise Element at: https://www.mtshastaca.gov/planning-department/page/current-planning-projects

Tables 4.13-1 and 4.13-2 include noise standards that are applicable to the proposed project based on proposed uses and existing sensitive receptors in the project area. **Table 4.13-1** shows the standards that apply to new uses affected by non-transportation noise (e.g., stationary sources, playgrounds, parks, other outdoor activities, etc.).

Pursuant to General Plan Implementation Measure NZ-1.8(c), noise associated with construction activity between the hours of 7 a.m. and 5 p.m. is exempt from the standards shown in **Table 4.13-1;** construction activity outside of this period may exceed the cited standards if an exemption is granted by the City to cover special circumstances. **Table 4.13-2** shows the standards that apply to new uses affected by traffic and railroad noise.

Table 4.13-1
Noise Standards for New Uses Affected by Non-Transportation Noise

New Land Use	Outdoor Activity Area Leq		Interior Area Leq	Notes
	Daytime	Nighttime	Daytime and Nighttime	
All Residential	50	45	35	1, 2, 7
Transient Lodging	55	-	40	3
Hospitals and Nursing Homes	50	45	35	4
Theaters & Auditoriums	-	-	35	-
Churches, Meeting Halls, Schools, Libraries, etc.	55	-	40	-
Office Buildings	55	-	45	5, 6
Commercial Buildings	55	-	45	5, 6
Playgrounds, Parks, etc.	65	65	-	6
Industry	65	65	50	5

1. Outdoor activity areas for single-family residential uses are defined as back yards. For large parcels or residences with no clearly defined outdoor activity area, the standard shall be applicable within a 100-foot radius of the residence.
2. For multi-family residential uses, the exterior noise level standard shall be applied at the common outdoor recreation area, such as at pools, play areas or tennis courts.
3. Outdoor activity areas of transient lodging facilities include swimming pool and picnic areas, and are not commonly used during nighttime hours.
4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. Only the exterior spaces of these uses designated for employee or customer relaxation have any degree of sensitivity to noise.
6. The outdoor activity areas of office, commercial, and park uses are not typically utilized during nighttime hours.
7. It may not be possible to achieve compliance with this standard at residential uses located immediately adjacent to loading dock areas of commercial uses while trucks are unloading. The daytime and nighttime noise level standards applicable to loading docks shall be 55 and 50 dBA Leq, respectively.
8. The outdoor

General: The standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the General Plan noise level standards, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.

Source: City of Mt. Shasta General Plan Noise Element, 2007.

Table 4.13-2
Noise Standards for New Uses Affected by Traffic and Railroad Noise

New Land Use	Outdoor Activity Area Ldn	Interior Area Ldn/Peak Hour Leq [1]	Notes
All Residential	60 - 65	45	2, 3, 4
Transient Lodging	65	45	5
Hospitals & Nursing Homes	60	45	6
Theaters & Auditoriums	-	35	-
Churches, Meeting Halls, Schools, Libraries, etc.	60	40	-
Office Buildings	65	45	7
Commercial Buildings	65	50	7
Playgrounds, Parks, etc.	70	-	-
Industry	65	50	7

New Land Use	Outdoor Activity Area Ldn	Interior Area Ldn/Peak Hour Leq [1]	Notes

1. For traffic noise within the City, Ldn and peak-hour Leq values are estimated to be approximately similar. Interior noise level standards are applied within noise-sensitive areas with windows and doors in the closed positions.
2. Outdoor activity areas for single-family residential uses are defined as back yards. For large parcels or residences with no clearly defined outdoor activity area, the standard shall be applicable within a 100-foot radius of the residence.
3. For multi-family residential uses, the exterior noise level standard shall be applied at the common outdoor recreation area, such as at pools, play areas or tennis courts.
4. Where it is not possible to reduce noise in outdoor activity areas to 60 dBA Ldn or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dBA Ldn may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
5. Outdoor activity areas of transient lodging facilities include swimming pool and picnic areas.
6. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
7. Only the exterior spaces of these uses designated for employee or customer relaxation have any degree of sensitivity to noise.

Source: City of Mt. Shasta General Plan Noise Element, 2007.

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 one 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, 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).

Ambient noise levels in the vicinity of the water tanks site are typical of rural residential areas. Primary noise sources in rural environments are household pets, landscape equipment (e.g., lawnmowers, hedge trimmers, leaf blowers, etc.), natural noise (wind, birds, etc.), and vehicular traffic, including cars, trucks, and emergency vehicles.

Ambient noise levels in the vicinity of the new well site and along Spring Hill Road are influenced primarily by traffic on Interstate 5 (I-5), Union Pacific Railroad (UPRR) train traffic, and industrial facilities to the west on the west side of I-5. Ambient noise levels in the vicinity of water line improvements on North Mt. Shasta Boulevard are primarily from traffic noise on North Mt. Shasta Boulevard and UPRR train traffic.

Construction Noise

The nearest sensitive receptors to the new well site are single-family residences, ~1,700 feet to the west, west of Interstate 5 and the UPRR tracks. Due to the distance and existing ambient noise levels, construction noise associated with the proposed project would not be detectable at these residences. Sensitive receptors adjacent to the waterline extension on North Mt. Shasta Boulevard include Mt. Shasta City Park, ~200 feet to the south. Sensitive receptors in proximity to the proposed water tanks and associated utility line improvements include residences adjacent to Raspberry Way and Ski Village Drive.

Construction associated with the new water tanks and utility extensions on the water tanks site would occur as close as ~675 feet from the nearest residences to the east adjacent to Raspberry Way, and to the south, north of Ski Village Drive. Construction associated with installation of the waterline in Ski Village Drive would occur as close as ten feet from the nearest residence, a multi-family dwelling at the western extent of improvements on Ski Village Drive. The remainder of the residences along Ski Village Drive are a minimum of ~25 feet from the roadway.

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

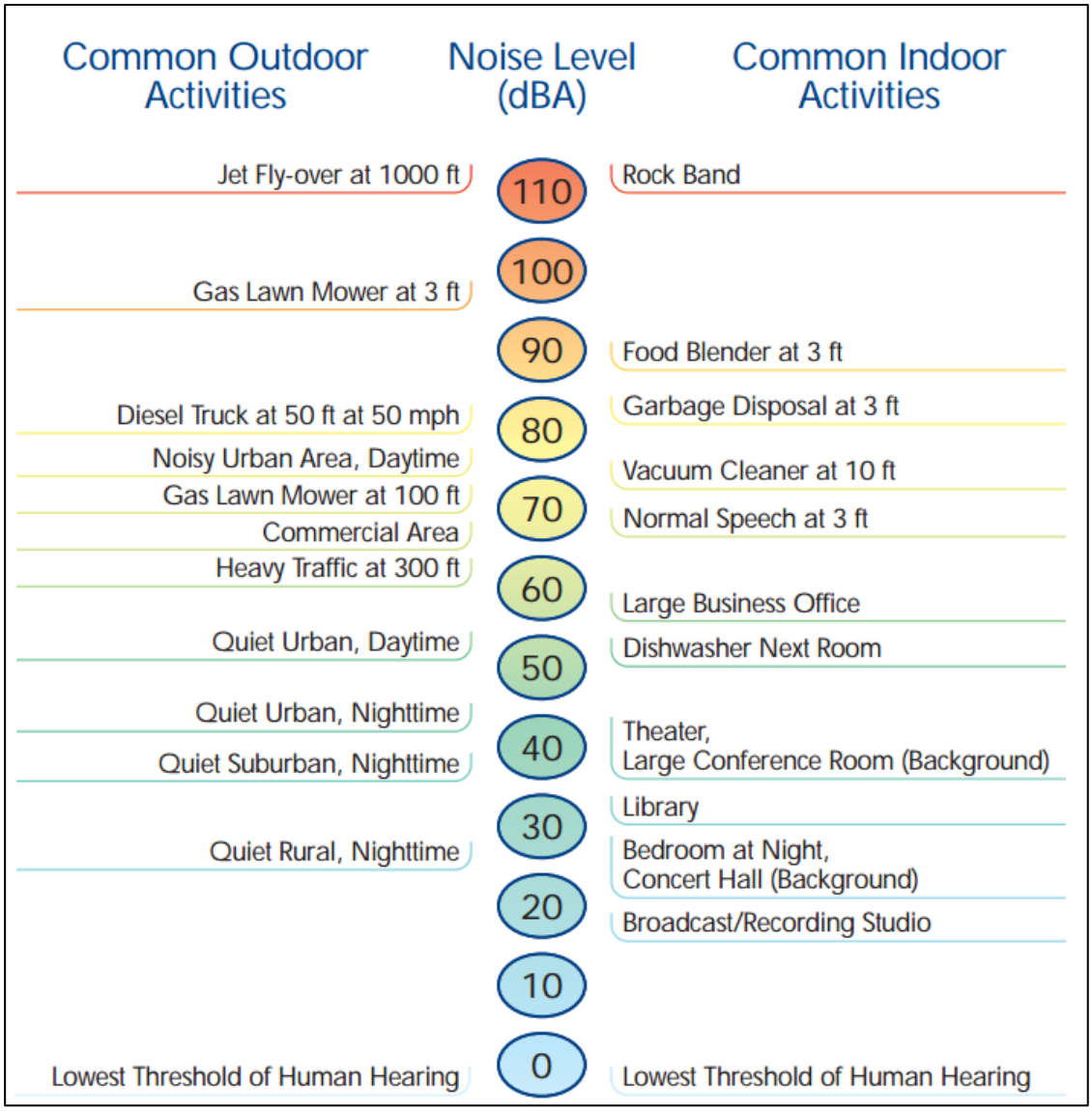
Noise levels from construction-related activities would fluctuate, depending on the number and type of construction equipment operating at any given time. As shown in **Table 4.13-3**, construction equipment anticipated to be used for project construction typically generates maximum noise levels ranging from 74 to 89 dBA at a distance of 50 feet.

TABLE 4.13-3
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.

Figure 4.13-1
Noise Levels of Common Activities



Source: Caltrans, 2016.

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. These regulations require an alarm to be at a level that is distinguishable from the surrounding noise level (~5 dB).

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.

Assuming typical California construction methods, interior noise levels are approximately 10 to 15 dBA lower than exterior levels within residential units with the windows partially open, and approximately 20 to 25 dB lower than exterior noise levels with the windows closed.

The new well and new storage tanks would be constructed on soft, semi-vegetated terrain, and it is anticipated that noise would attenuate at 7.5 dBA per doubling distance. Waterline improvements would occur on hard, flat surfaces, and it is anticipated that noise would attenuate at 6 dBA per doubling distance.

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 4.13-4.** 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 4.13-4
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
50	17

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

In addition, as shown in **Table 4.13-5**, 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, and the sound level from the second source is 85 dB, the level from both sources together would be 86 dB. To calculate cumulative noise for more than two sources, begin with the two lower levels to find their combined level and add their sum to the next highest level; continue until all noise sources are incorporated.

TABLE 4.13-5
Cumulative Noise: Different Sources

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

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

Disregarding the noise attenuation due to intervening topography, barriers, wind, and other factors, with more than one piece of equipment with a cumulative noise level of 89 dBA operating

on Ski Village Drive adjacent to the residence at the western extent of the improvements (as close ten feet), exterior noise levels at the residence could sporadically reach ~103 dBA; interior noise levels could reach ~83 dBA, provided the windows were closed.

During construction activities on the water tanks site, noise levels at the nearest residences on Raspberry Way and to the south, north of Ski Village Drive could reach ~61 dBA at the exterior of the residences and ~41 dBA at the interior of the residences, provided the windows were closed. Assuming that heavy vegetation and topography would attenuate noise by ~5 dBA, noise levels at the City Park could sporadically reach ~72 dBA. The noise levels noted above could be ~5 – 10 dBA higher during use of back-up alarms.

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.

As stated under Regulatory Context, pursuant to General Plan Implementation Measure NZ-1.8(c), noise associated with construction activity between the hours of 7:00 a.m. and 5:00 p.m. is exempt from the noise standards shown in **Table 4.13-1;** construction activity outside of this period may exceed the cited standards if an exemption is granted by the City to cover special circumstances. Although the City doesn't have 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).

As documented above, interior noise levels from construction equipment operation at the nearest sensitive receptor on Ski Village Drive could sporadically reach ~83 dBA, provided the windows were closed and could sporadically be ~5 to ~10 dBA higher during use of reverse signal alarms.

However, construction equipment does not operate continuously throughout the entire workday. 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, **MM 4.13.1** limits construction activities to between the daytime hours of 7:00 a.m. and 5:00 p.m., to ensure consistency with the City's General Plan. **MM 4.13.2** requires that construction equipment be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds. **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. Implementation of **MM 4.13.1, 4.13.2, and 4.13.3** ensures that impacts during construction are less than significant.

Operational Noise

Project components with the potential for operational noise impacts include new pumps, motors, and mechanical equipment associated with the new well, and the new emergency back-up generator.

The noise-generating equipment would be installed inside of the new well building, and noise would not be discernable outside of the building. In addition, the generator would be operated only in the event of an emergency, such as a power outage, and periodically for daytime testing. The nearest sensitive receptor to the well site is over ~1,700 feet to the west on the opposite side of I-5. Due to the distance and existing ambient noise levels in the area of the residence, noise associated with the generator would not be detectable at the residence.

Therefore, noise levels generated during operation would not exceed the City's threshold for stationary noise sources as outlined in the City's General Plan; operational noise would be less than significant.

Conclusion

As discussed above, **MM 4.13.1, MM 4.13.2, and MM 4.13.3** would minimize noise during construction, and operational noise would comply with the City's noise standards. Therefore, impacts would be ***less than significant.***

Question B

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

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

Table 4.13-6 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 4.13-6
Structural Damage Thresholds from Ground-Borne Vibration

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

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

Table 4.13-7 indicates the potential for annoyance to humans as a result of ground-borne vibration.

TABLE 4.13-7
Human Response to Ground-Borne Vibration

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

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

Table 4.13-8 indicates vibration levels for various types of construction equipment that may be used for the proposed project.

TABLE 4.13-8
Examples of Construction Equipment Ground-Borne Vibration

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

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

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

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

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 jackhammer at a distance of ten feet from the nearest residence at the western end of Ski Village Drive would generate a PPV of up to 0.10 inches per second. Based on the equation above, a jackhammer at a distance of 25 feet from residences and commercial buildings along Ski Village Drive would generate a PPV of up to 0.035 inches per second.

As shown in **Table 4.13-6**, vibration levels would not be at a level that would cause structural damage. In addition, shown in **Table 4.13-7**, these vibration levels would be distinctly to strongly perceptible but would not rise to a level that would be considered disturbing.

New equipment at the well building has a minimal potential to result in an increase in groundborne vibration or groundborne noise due to the operation of mechanical equipment (e.g., pumps, motors, etc.). Due to the distance between the well and the nearest buildings (a residence ~1,700 feet to the west and a commercial building ~1,700 feet to the north), equipment at the new well would not generate vibration that would be detectable at the nearest buildings. Therefore, impacts associated with vibration would be ***less than significant***.

Question C

According to the Federal Aviation Administration (FAA), the project area is not located in the vicinity of a private airstrip. As stated in Section 4.9 under Question E, the Dunsmuir Municipal-Mott Airport is located approximately 4.7 miles southeast of the southerly boundary of the project site. According to the Siskiyou County Airport Land Use Compatibility Plan, the project area is not located within an airport influence area (Siskiyou County, 2001). Therefore, the project would not expose people residing or working in the project area to excessive noise levels associated with an airport or private airstrip; there would be ***no impact***.

CUMULATIVE IMPACTS

As documented above, the project would not result in adverse effects associated with vibration either during construction or operation. Although there would be a minimal increase in operational noise, all projects in City must comply with the City's noise standards for new development. The proposed project would result in a temporary increase in daytime noise levels during construction activities. However, with implementation of **MM 4.13.1** through **MM 4.13.3**, the proposed project's contribution to cumulative noise impacts would be less than significant.

MITIGATION

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 hours of 7:00 a.m. and 5:00 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 City's Public Works Director 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

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4.14 POPULATION AND HOUSING

Would the project:

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

REGULATORY CONTEXT

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

LOCAL

City of Mt. Shasta General Plan, Housing Element

The City's General Plan includes the following Goal, Policy, and Implementation Measure (IM) that apply to the proposed project:

City of Mt. Shasta General Plan – Housing Element		
Goal	HO-1	Provide an adequate supply of sound, affordable housing for existing and future residents of Mt. Shasta.
Policy	HO-1.5	With all due consideration to financial constraints, and consistent with other General Plan policies, the City shall encourage, participate, and cooperate in extension of City services to currently unserved and underserved areas, including direct financial participation when deemed appropriate by the City Council.
IM	HO-1.5.2	The City shall continue to develop and implement plans to expand domestic water and sewage collection and treatment systems such that planned development over the General Plan 20-year timeframe can be accommodated.

DISCUSSION OF IMPACTS

Question A

According to the City's 2023-2031 Housing Element, between 2010 and 2020, the population of the City of Mt. Shasta decreased from 3,394 in 2010 to 3,223 in 2020, with an average annual decrease of 1.7 percent (City of Mt. Shasta, 2024). According to the California Department of Finance (DOF), the City's population as of January 1, 2025, was 3,179 (DOF, 2025).

The City's Housing Element also states that Siskiyou County's population as a whole declined; the Countywide population in 2010 was 44,855, and the population in 2020 was 43,792. According to the DOF, the County's population as of January 1, 2025, was 43,311. The DOF also provides population projections for Counties through 2060. The DOF projects that Siskiyou County's population will continue to decline through to 2060, with an average annual decrease of 1.43 percent (DOF, 2025)

The Environmental Impact Report prepared for the City's 2007 General Plan projected an annual growth rate of two percent over the General Plan's 20-year timeframe (PMC, 2006). The City's 2010

Master Water Plan used a projected growth rate of one percent for the following 20 years for planning purposes (PACE, 2011).

As stated in the City's 2023-2031 Housing Element, based on the City's historic growth rate and the current economic downturn, it is unlikely that the City's future growth rate will approach the projected rates (City of Mt. Shasta, 2024).

According to the 2021 Municipal Service Review (MSR) prepared for the City of Mt. Shasta by the Siskiyou Local Agency Formation Commission (LAFCO) the potential for population growth within the City in the coming years is very limited and highly dependent on the economy and availability of housing (Siskiyou LAFCO, 2021). The MSR references the City's 2009 Impact Fee Report, which identifies the Spring Hill area as the City's primary growth area. Spring Hill encompasses 588 acres in the northernmost portion of the City, of which ~341 acres are developable (PMC, 2009).

According to the City's MSR, the Spring Hill area includes both the Big Lakes area and the currently undeveloped Spring Hill Subdivision.

The City's General Plan identifies four distinct sub-areas of the Spring Hill Area. One area consists of the smaller-sized parcels along Spring Hill Road. A second sub-area consists of two large parcels to the east behind the lots fronting Spring Hill Road. A third sub-area at the northernmost portion of the City is the Springhill sand and gravel quarry. A fourth sub-area is the prominent hill called "Spring Hill".

Due to the elevation of the Spring Hill Subdivision to the north of Spring Hill, it cannot be served by gravity from the existing City water system. According to the MSR, in order to provide adequate fire flows in the Spring Hill area, it would be necessary to construct a new reservoir at a higher elevation, and it would also eventually be necessary to develop a well supply north of Spring Hill (Siskiyou LAFCO, 2021).

The proposed project would remove impediments to development by providing water storage and an additional source of water supply; however, it would have only minimal influence over the development of additional properties in the area because there are many other factors that influence the density and timing of development (e.g., cost of installing water, sewer, electric, and gas infrastructure; cost of completing roadway improvements, regulatory controls, economic conditions, property owner decisions, and other market forces).

In addition, according to the City's General Plan, the Spring Hill area is identified as a special planning area "because of its unique development opportunities as well as the challenge of infrastructure limitations and development constraints."

The City's General Plan requires that prior to development in the Spring Hills area, a Specific Plan must be prepared to establish a clear path for subsequent development of the area and the provision of adequate infrastructure to support that development (General Plan Goal LU-20).

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 documented above, development in the Spring Hill area has been contemplated by the City for many years. Development in the area is addressed in the City's General Plan, and growth projections for the area are included in the City's General Plan, Water Master Plan, MSR, and other planning documents.

Because the proposed project does not involve construction of residences or businesses, the project would not directly induce population growth.

Although the project would remove impediments to development by providing water storage and supply, future development in the area would be in accordance with the City's General Plan and a Specific Plan that would be completed prior to development. Therefore, the project would not induce unplanned population growth, either directly or indirectly. There would be ***no impact***.

Question B

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

CUMULATIVE IMPACTS

As documented above, the proposed project would not indirectly 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

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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?	☐	☐	☐	☒
b. Police protection?	☐	☐	☐	☒
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other public facilities?	☐	☐	☐	☒

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 construction of residences or businesses that would directly increase the number of residents in the area and result in a demand for new or physically altered government facilities.

In addition, as discussed in Section 4.14 under Question A, even with the addition of water storage and a new municipal water source, an increase in population over what was anticipated in the City's General Plan and other planning documents is not expected. 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

City of Mt. Shasta. 2007. City of Mt. Shasta General Plan, Land Use Element and Open Space and Conservation Element. https://www.mtshastaca.gov/planning-department/page/current-planning-projects. Accessed January 2025.

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?	☐	☐	☐	☒
b. Include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

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 and B

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

CUMULATIVE IMPACTS

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

MITIGATION

None necessary.

DOCUMENTATION

City of Mt. Shasta. 2007. City of Mt. Shasta General Plan, Open Space and Conservation Element. https://www.mtshastaca.gov/planning-department/page/current-planning-projects. Accessed January 2025.

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?	☐	☐	☐	☒
b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) (criteria for analyzing transportation impacts – vehicle miles traveled)?	☐	☐	☐	☒
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d. Result in inadequate emergency access?	☐	☐	☒	☐

REGULATORY CONTEXT

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

STATE

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 traveled (VMT). VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of a 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.

LOCAL

City of Mt. Shasta General Plan, Circulation Element

The City's General Plan includes the following Goals, Policy, and Implementation Measures (IMs) that apply to the proposed project:

City of Mt. Shasta General Plan – Circulation Element		
Goals	CI-8	Promote safe and efficient pedestrian and bicycle transportation and other modes of non-motorized transportation.
Policy	CI-1.1	Level of service shall be the standard for judging whether a road has adequate remaining capacity for average daily traffic generated by a proposed project.
	CI-8.1	Promote the development of bikeways, sidewalks, pedestrian pathways and multi-use paths that connect residential neighborhoods with other neighborhoods, schools, employment centers, commercial centers and public open space, and that separate bicyclists, skateboarders and pedestrians from vehicular traffic whenever possible. Ensure that pedestrian facilities follow logical routes designed to serve pedestrian needs and are not constructed as "sidewalks to nowhere".

In addition to the General Plan, the City adopted the Mt. Shasta Mobility Plan in 2022 to identify infrastructure improvements needed to establish a safe multi-modal transportation system that accommodates the needs of all travelers, including pedestrians and bicyclists (City of Mt. Shasta, 2022). In the project area, the plan recommends a future Class II bike lane on Ski Village Drive, a Class I shared-use path north of Ski Village Drive on private property, and a Class IV separated bikeway on North Mt. Shasta Boulevard. The Plan also recommends completion of a trail study that would include the Spring Hill Road area.

DISCUSSION OF IMPACTS

Question A and B

The 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. Although an increase in VMT would occur during construction, this is a temporary impact that would cease at completion of the project. 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. Although the Mt. Shasta Mobility Plan identifies future improvements in areas in which waterline improvements would occur, the project does not include any components that would impede future bikeway or trail projects as identified in the Mobility Plan (City of Mt. Shasta, 2022). Therefore, there would be ***no impact.***

Questions C and D

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; however, 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. Work conducted within the public road ROW of Spring Hill Road, North Mt. Shasta Boulevard, and Ski Village Drive could potentially increase traffic hazards and interfere with emergency response times. However, as stated in Section 4.9 (Hazards and Hazardous Materials) under Question F, in order to ensure adequate emergency access during construction, temporary traffic control during work in the public road ROW would be provided in accordance with the current MUTCD. The City also has the discretion to require a temporary traffic control plan that would identify temporary traffic control measures that would be implemented during the work. Therefore, impacts would be ***less than significant.***

CUMULATIVE IMPACTS

The proposed project would not result in a permanent increase in VMT and would not conflict with programs, plans, ordinances, or policies addressing the circulation system. Further, the project would not permanently increase hazards due to design features or incompatible uses. There would be a temporary increase in traffic associated with construction workers and equipment, and work within public road ROWs 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

City of Mt. Shasta. 2022. Mt. Shasta Mobility Plan. https://www.mtshastaca.gov/media/1916. Accessed April 2025.

_____. 2007. City of Mt. Shasta General Plan, Circulation Element. https://www.mtshastaca.gov/planning-department/page/current-planning-projects. Accessed January 2025.

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)?	☐	☒	☐	☐
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.	☐	☒	☐	☐

REGULATORY CONTEXT

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

STATE

California Environmental Quality Act (CEQA)

Assembly Bill 52 of 2014 (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
   a. Included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR); or
   b. Included in a local register of historical resources as defined in PRC §5020.1(k).
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC §5024.1(c). In applying the criteria set forth in PRC §5024.1(c), the lead agency shall consider the significance of the resource to a California Native American tribe.

In addition, a cultural landscape that meets the criteria described above is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

A historical resource described in PRC §21084.1, a unique archaeological resource as defined in PRC §21083.2(g), or a "nonunique archaeological resource" as defined in PRC §21083.2(h) may also be a tribal cultural resource if it meets the criteria described in item 1a. or 1b. above.

Consultation is considered concluded when either both parties agree to mitigation measures to avoid or mitigate a significant effect, or a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. Pursuant to PRC §21082.3, any agreed-upon mitigation measures shall be recommended for inclusion in the environmental document if determined to avoid or lessen the impact.

LOCAL

City of Mt. Shasta General Plan, Open Space and Conservation Element

The City's General Plan includes the following Goal, Policy, and Implementation Measures (IMs) that apply to the proposed project:

City of Mt. Shasta General Plan – Open Space and Conservation Element		
Goal	OC-8	Preserve areas of significant cultural resources.
Policy	OC-8.1	Ensure that appropriate measures are taken concerning protection or study of significant cultural resources.
IMs	OC-8.1(b)	When projects are proposed on lands identified as having Medium Cultural Resource Sensitivity, the application shall be accompanied by an Archival Report compiled by a qualified archaeologist. If there is likelihood that cultural resources are present on the site, the City may require field reconnaissance or other similar study to determine the location, potential for disturbance, and scope of mitigation.
	OC-8.1(c)	The scope of mitigation shall conform to the requirements of the California Environmental Quality Act with an emphasis on avoiding, if feasible, disturbance of the cultural resource. Avoidance may be accomplished by capping the site, if appropriate.
	OC-8.1(d)	When approving construction projects, the City shall incorporate the following mitigation measure, or a similar measure that would fulfill the intent: Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, or architectural remains be encountered during development activities, work shall be suspended and the City Planning Department shall be immediately notified. At that time, the City will coordinate any necessary investigation of the discovery with an appropriate specialist (e.g., archaeologist or architectural historian). The project proponent shall be required to implement mitigation necessary for the protection of cultural resources. The City and the project applicant shall consider mitigation recommendations presented by a qualified archeologist for any unanticipated discoveries. The City and the project applicant shall consult and agree upon implementation of a measure or measures that the City and project applicant deem feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.

OC-8.1(e)	When approving construction projects, the City shall incorporate the following mitigation measure, or a similar measure that would fulfill the intent: If human remains are discovered, all work must stop in the immediate vicinity of the find, and the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

DISCUSSION OF IMPACTS

Questions A and B

As detailed in Section 4.5 (Cultural Resources), ENPLAN consulted with Native American tribes that were identified by the Native American Heritage Commission (NAHC). On December 10, 2024, comment solicitation letters were sent to the identified tribes. Follow-up correspondence was conducted on January 29, 2025, to the individuals that were previously identified by the NAHC. See Section 4.5 for discussion of the comments were submitted by the Tribes in response to solicitation.

Section 4.5 describes the Native American consultation effort that was completed for the project.

In addition, on February 19, 2025, the City delivered formal notification initiating tribal cultural resources consultation with Chief Caleen Sisk of the Winnemem Wintu Tribe in compliance with AB 52. No other California Native American tribes have requested that the City provide formal notification of proposed projects in the geographical area.

On March 3, 2025, Mark Miyoshi, Tribal Historic Preservation Officer (THPO) with the Winnemem Wintu Tribe responded to the City and stated that the Tribe would like to start AB 52 consultation with the City.

On March 24, 2025, THPO Miyoshi sent an email to Ken Kellogg, Public Works Director for the City, stating that he was compiling information that the Tribe prepared and submitted to the County for the previously proposed Crystal Geyser Water Bottling Plant.

On May 8, 2025, Mr. Kellogg provided a copy of the Administrative Draft IS/MND to THPO Miyoshi. Mr. Miyoshi replied on May 12, 2025, and stated that he would review the information and reply to the City. As of July 28, 2025, no additional information had been provided to the City by the Tribe. The information previously provided to the County is considered confidential and is not available for public review.

The City will continue to consult with the Winnemem Wintu Tribe through to adoption of the MND. Any measures necessary to protect identified tribal cultural resources will be incorporated into the MND in consultation with the Tribe.

Mitigation Measures MM 4.5.1 and 4.5.2 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, **MM 4.5.1 and 4.5.2** address the inadvertent discovery of cultural resources and human remains; therefore, the proposed project would have less-than-significant cumulative impacts on tribal cultural resources.

MITIGATION

Implementation of **MM 4.5.1 and 4.5.2.**

DOCUMENTATION

City of Mt. Shasta. 2007. City of Mt. Shasta General Plan, Open Space and Conservation Element. https://www.mtshastaca.gov/planning-department/page/current-planning-projects. Accessed January 2025.

ENPLAN. 2025. Cultural Resources Inventory Report: City of Mt. Shasta Spring Hill Water Supply and Storage, Siskiyou County, California. 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?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒
c. Result in a determination by the wastewater treatment provider 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?	☐	☐	☐	☒
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

REGULATORY CONTEXT

There are no federal 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.

California Building Standards Code

The CALGreen Code, included as Part 11 of the CBSC, includes requirements for construction waste reduction, disposal, and recycling. The intent of this requirement is to reduce the amount of waste from new construction and demolition that would be sent to landfills, and to encourage reuse and recycling of construction waste products (e.g., carpet, wood, aggregate, shingles, wallboard, and other materials that have recyclable value). A minimum of 65 percent of nonhazardous construction and demolition waste must be recycled and/or salvaged for reuse. The CALGreen Code requires that a Construction Waste Management Plan be submitted with the building permit application and approved by the Building Official prior to issuance of a building permit.

LOCAL

City of Mt. Shasta General Plan, Land Use Element and Circulation Element

The City's General Plan includes the following Goals, Policies, and Implementation Measures (IMs) that apply to the proposed project:

City of Mt. Shasta General Plan – Land Use Element		
Goal	LU-18	Maintain a water supply and distribution system that meets drinking water standards and that serves the domestic and fire protection needs of the community.
Policy	LU-18.1	Ensure that the growth of the community does not outstrip the water supply and distribution system of the City.
IMs	LU-18.1(b)	Update the City Water Master Plan and utilize the updated Water Master Plan to prioritize water infrastructure improvements and expansion programs to serve the existing and planned development of the community.
	LU-18.2(a)	The City shall encourage the enforcement of all federal, state, regional and county regulations and shall enforce local regulations regarding the preservation and enhancement of water quality as it relates to the City's water sources.
City of Mt. Shasta General Plan – Circulation Element		
Goal	CI-9	Ensure adequate utilities to meet community needs.
Policy	CI-9.1	Encourage participation of public utilities in the project review process.
IM	CI-9.1(b)	Support efforts by utilities to upgrade and improve service to the Mt. Shasta area.

DISCUSSION OF IMPACTS

Question A

As discussed under Section 4.14 under Question A, the proposed project would not induce unplanned population growth in the area, either directly or indirectly, in a manner that would require new or expanded utility infrastructure. Therefore, other than the improvements analyzed in this Initial Study (Section 3.2, Project Components/Physical Improvements), the proposed project would not result in the need for new or expanded utility infrastructure or the relocation of such infrastructure. Therefore, impacts would be ***less than significant***.

Question B

The City's 2010 Master Water Plan showed that the average annual water consumption between 2007-2009 was 614 MG, and the maximum month consumption was 100 MG, which occurred in July and August of 2007. As shown in Section 4.10 (Hydrology and Water Quality), Table 4.10-1, the highest annual consumption between 2019 and 2023 was 305.3 MG in 2020; the maximum month consumption was 47.7 MG in July 2020.

The drastic reduction in water consumption is due to several factors, including Statewide water conservation regulations that were enacted following prolonged drought conditions in the State. For example, following the drought between 2007 and 2009, the State passed Senate Bill (SB) x7-7 (the Water Conservation Act of 2009), which required the Department of Water Resources to develop water use efficiency targets for agencies to achieve 20 percent savings by 2020. Following the 2012-2016 drought, additional regulations were enacted to impose mandatory water use restrictions throughout the State.

Following the 2020-2022 drought, significant policy changes were introduced by the State. On October 22, 2024, the Office of Administrative Law approved the *Making Conservation a California Way of Life* regulation, which was adopted by the State Water Board on July 3, 2024. The regulation established water use efficiency goals for urban retail water suppliers in California with the purpose of adapting to climate change and more intense and frequent droughts in California (Association of California Water Agencies, 2024; State Water Resources Control Board, n.d.). The regulation includes a goal for residential indoor water use of 47 gallons per person per day in 2025, and 42 gallons per person per day by 2030. In comparison, the 2010 Water Master Plan estimated future water use based on 483 gallons per person per day.

As discussed in Section 4.14 under Question A, the proposed project would remove impediments to development by providing water storage and an additional source of water supply; however, it would have only minimal influence over the development of additional properties in the area because there are many other factors that influence the density and timing of development (e.g., cost of installing water, sewer, electric, and gas infrastructure; cost of completing roadway improvements, regulatory controls, economic conditions, property owner decisions, and other market forces). In addition, the City's General Plan requires that prior to development in the Spring Hills area, a Specific Plan must be prepared to establish a clear path for subsequent development of the area and the provision of adequate infrastructure to support that development. Section 4.7, Question A, also states that the City's population and the population of the County as a whole has experienced a decline in population over the past 15 years. According to Department of Finance population projections, it is expected that this trend will continue through to 2060.

As documented above, the City's water demand has decreased significantly since the Water Master Plan was prepared in 2010. Further, water use will continue to decline with implementation of existing State regulations for reducing water consumption throughout the State.

Because the proposed project would not significantly induce population growth either directly or indirectly in a manner that would require additional long-term water supplies, there would be ***no impact***.

Question C

In November 2015, an Initial Study and Mitigated Negative Declaration were prepared for the City of Mt. Shasta's State-Mandated Wastewater Treatment and Outfall Improvement Project (State Clearinghouse No. 2015112045) to address improvements to the City's Wastewater Treatment Plant (WWTP) that were needed to come into compliance with CVRWQCB treatment and discharge requirements and to increase the wet weather treatment capacity of the facility (City of Mt. Shasta, 2015). The improvements increased the capacity of the WWTP to accommodate existing needs plus an allocation for anticipated future growth at a rate of one percent over the following 20 years.

According to the CVRWQCB, the WWTP improvements increased the average dry weather flow (ADWF) capacity from 0.8 MGD to 0.9 MGD and increased the peak wet weather flow (PWWF) capacity from 2.1 MGD to 3.6 MGD (CVRWQCB, 2023).

As discussed under Question B above, the City's population has declined in the past few years, and continuing decline is expected. In addition, water consumption in the City has decreased, which results in decreased flows to the WWTP.

As stated in the CVRWQCB NPDES permit (Order R5-2023-0016), Waste Discharge Requirements for the WWTP, the City is required to monitor waste flows and determine when flows will reach hydraulic and treatment capacities (CVRWQCB, 2023). When any projection shows that capacity of any part of the facilities may be exceeded in four years, the City must notify the CVRWQCB. The City would then be required to submit a technical report showing how it would prevent flow volumes from exceeding capacity or how it would increase capacity to handle the larger flows (CVRWQCB, 2023).

At this time, no additional capacity improvements to the WWTP are required. There would be **no impact**.

Questions D and E

There are a total of five transfer stations in Siskiyou County. Solid waste, recycling, and other waste that is brought to one of the transfer stations is then transferred to either the Dry Creek Landfill in White City, Oregon, or to the Anderson Landfill in Anderson, California (Siskiyou County, 2024).

The nearest transfer station to the project site is the Black Butte Transfer Station located north of the project area on Spring Hill Road.

The Black Butte Transfer Station is permitted through the California Integrated Waste Management Board (CIWMB). The maximum permitted throughput is 100 tons per day and the site capacity is a total of 150 tons (CalRecyle, 2024). The Transfer Station is subject to periodic inspections by Siskiyou County to ensure compliance with the CIWMB permit.

The proposed project would not result in a long-term demand for additional solid waste services. Solid waste would be generated during construction, primarily from removal of pavement within the public road ROWs of Ski Village Drive, North Mt. Shasta Boulevard and Spring Hill Road to accommodate the waterline improvements. Asphalt and concrete is typically hauled to an asphalt recycling facility rather than disposed of at a solid waste facility. As stated under Regulatory Context, a minimum of 65 percent of nonhazardous construction and demolition waste must be recycled and/or salvaged for reuse.

The construction contractor would be responsible for disposing of all construction waste. The City 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 long-term 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

Association of California Water Agencies. 2024. Fact Sheet: Making Conservation a California Way of Life Regulation. https://www.acwa.com/wp-content/uploads/2024/07/WUE-Fact-sheet-July24.pdf. Accessed May 2025.

California State Water Resources Control Board. n.d. Water Conservation Portal. https://www.waterboards.ca.gov/conservation/regs/water_efficiency_legislation.html. Accessed May 2025.

CalRecycle. 2024. Facility Details: Black Butte Transfer Station. https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/4147. Accessed January 2025.

Central Valley Regional Water Quality Control Board. 2023. National Pollutant Discharge Elimination System (NPDES) CA0078051 (Order R5-2023-2016), Waste Discharge Requirements for the City of Mt. Shasta and U.S. Department of Agriculture – Forest Service, City of Mt. Shasta Wastewater Treatment Plant, Siskiyou County. https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/siskiyou/r5-2023-0016_npdes.pdf. Accessed May 2025.

City of Mt. Shasta. 2015. Initial Study and Mitigated Negative Declaration, State-Mandated Wastewater Treatment and Outfall Improvement Project (SCH 2015112045). https://ceqanet.opr.ca.gov/Project/2015112045.

_____. 2007. City of Mt. Shasta General Plan, Land Use Element and Circulation Element. https://www.mtshastaca.gov/planning-department/page/current-planning-projects. Accessed January 2025.

Rogue Disposal and Recycling, Inc. 2024. Dry Creek Landfill Data. https://roguedisposal.com/about-us/our-landfill. Accessed January 2025.

Siskiyou County. 2024. Background Report, Siskiyou County General Plan Update. https://siskiyou2050.com/images/docs/SKYGP_BR_FULL_2024-05-07-RL-Reduced.pdf. Accessed April 2025).

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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

REGULATORY CONTEXT

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

Chapter 33 of the CFC (Fire Safety During Construction and Demolition) includes minimum safeguards that must be implemented during construction, alteration, and demolition activities to protect adjacent properties and structures from fire. Requirements are provided for cutting and welding activities, storage of flammable and combustible materials, blasting operations, and other construction-related activities. Vehicle access to the construction site for fire department personnel must be provided by either temporary or permanent roads capable of supporting vehicle loading under all weather conditions.

California Building Standards Code

California Building Code Chapter 7A (Materials and Construction Methods for Exterior Wildfire Exposure) includes standards for new construction in Wildland-Urban Interface (WUI) Fire Areas. A WUI includes areas in State Responsibility Areas (SRA) that are designated Very High, High, or Moderate fire hazard severity zones (FHSZs); and areas within a Local Responsibility Area (LRA) that are designated as Very High FHSZs. The purpose of Chapter 7A 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

City of Mt. Shasta General Plan, Safety Element

The City's General Plan includes the following Goals that apply to the proposed project:

City of Mt. Shasta General Plan – Safety Element		
Goals	SF-4	Protect property and life from fire hazards.
	SF-7	Identify and maintain emergency evacuation routes.

DISCUSSION OF IMPACTS

According to FHSZ maps prepared by CAL FIRE, the water tanks site is located within a Very High FHSZ in a State Responsibility Area (SRA) and the well site and water line improvements in Ski Village Drive and North Mt. Shasta Boulevard are located within a Very High FHSZ in a Local Responsibility Area (LRA).

Question A

See discussion in Section 4.9, 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.

Work conducted within the public road ROWs of Spring Hill Road, North Mt. Shasta Boulevard, and Ski Village Drive could potentially interfere with emergency response times. However, pursuant to Cal/OSHA requirements, temporary traffic control is required during completion of activities that require work in the public ROW and must adhere to the procedures, methods and guidance given in the current edition of the California Manual on Uniform Traffic Control Devices (MUTCD) (Caltrans, 2025). Access to properties in the project area would be maintained throughout construction. Therefore, impacts would be ***less than significant***.

Questions B and C

The new water tanks are located in an area with steep slopes and dense vegetation, which increase wildfire risks in the area. During a fire, steeper slopes generally facilitate the faster spread of fire upslope and slower spread downslope. During construction, the use of heavy equipment and power tools may create sparks that could ignite surrounding vegetation. 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, construction activities are subject to California Fire Code (CFC) regulations that identify minimum safeguards that must be implemented during construction, alteration, and demolition activities to protect life and property from fire, including CFC Chapter 33 (Fire Safety During Construction and Demolition) and Chapter 35 (Welding and Other Hot Work).

These regulations are intended to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment, and promote prompt response to fire emergencies.

In addition, CBC standards for roofing, siding, decking, windows, and vents apply in all Very-High FHSZs. At a minimum, roof coverings would be Class A, which is the highest rating and provides the highest resistance to fire. Exterior walls would be ignition resistant/non-combustible. The purpose of the CBC and CFC standards is to prevent a building from being ignited by flying embers and to contribute to a systematic reduction in fire-related losses through the use of performance and prescriptive requirements.

The proposed project would not involve construction of public roads or otherwise intrude into natural spaces in a manner that would increase wildfire hazards in the long term, and would not require construction of fuel breaks, installation of emergency water sources, or other fire prevention/ suppression infrastructure.

Compliance with existing regulations would avoid/minimize the risk of wildfires and the exposure of people to pollutant concentrations from a wildfire. In the long term, the project would increase water storage capacity and improve fire flows, which would improve the ability to fight wildfires in the area. Therefore, impacts would be ***less than significant.***

Question D

The severity of post-fire risks is based on several factors, including the intensity of the fire, the slope and stability of the burned area, physical properties of the soils, and the intensity of post-fire precipitation.

On May 19, 2025, the Spring Fire ignited on the west side of Spring Hill. The fire was on the opposite side of Spring Hill from the water tank site and ~0.5 miles south of the Spring Hill Road well site. It is estimated that the fire burned ~12 acres. As shown in the photo, although the fire was on a steep slope and several trees were destroyed, the surrounding area was not damaged and the severity of post-fire risks (e.g., slope instability, flooding, landslides, etc.) in the area would be considered low.



Post Fire Photo: Spring Hill facing southeast from Spring Hill Road.
Source: Hike Mt. Shasta website.

As stated in Section 4.7 (Geology and Soils), the Landslide Susceptibility Map included in the Draft 2025 Siskiyou County Local Hazard Mitigation Plan Update indicates that areas in which improvements are proposed have a low susceptibility for landslide hazards (Siskiyou County, 2025). Further, the project sites are not located within a designated flood hazard area.

The addition of impervious surfaces would alter the existing drainage pattern of the site, which would increase runoff from the site above existing conditions. As stated in Section 3.0 (Project Description), a new stormdrain pipe would be installed from the water tanks, south to Ski Village Drive, where it would discharge into an existing well-developed drainage ditch. This will ensure that any overflow water from the tanks does not lead to increased erosion or siltation. Any such discharge would be infrequent, and any significant discharge, such as from drawdown of the tank for maintenance purposes, would be controlled to prevent adverse effects.

In addition, as stated in Section 4.10 (Hydrology and Water Quality) under Question C, 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 upstream or downstream.

Further, the project area is not located within a designated flood hazard area and would not be exposed to risks associated with downslope or downstream flooding attributable to post-fire slope instability, runoff, or drainage changes. Therefore, the potential for post-fire impacts would be ***less than significant***.

CUMULATIVE IMPACTS

Although work would occur in the road ROW and could interfere with emergency response times, all projects are required to implement temporary traffic control measures to ensure safe passage for emergency response vehicles. Access to properties in the area would not be impeded during construction.

As documented above, the proposed project would not contribute individually or cumulatively to increased risks of wildfire in the long term and would not expose people or structures to risks associated with downslope or downstream flooding or landslides that could result from increased runoff, post-fire slope instability, or drainage changes. Although cumulative wildfire risks could occur during construction, compliance with existing regulations adequately minimizes such risks. Therefore, the project's contribution to cumulative impacts would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Forestry and Fire Protection (CAL FIRE). 2024. Fire Hazard Severity Zone Viewer. https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/. Accessed November 2024.

California Department of Transportation. 2025. California Manual on Uniform Traffic Control Devices. https://dot.ca.gov/programs/safety-programs/camutcd. Accessed April 2025.

City of Mt. Shasta. 2007. City of Mt. Shasta General Plan, Safety Element. https://www.mtshastaca.gov/planning-department/page/current-planning-projects. Accessed January 2025.

Federal Emergency Management Agency (FEMA). 2024. National Flood Hazard Map (Panel 06093C3025D, effective January 19, 2011). https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed February 2025.

Siskiyou County. 2025. Draft Siskiyou County Local Hazard Mitigation Plan Update. https://www.co.siskiyou.ca.us/emergencyservices/page/local-hazard-mitigation-plan. Accessed January 2025.

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?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	☐	☒	☐	☐
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

DISCUSSION OF IMPACTS

Question A

As discussed in the applicable environmental resource sections in this Initial Study, the proposed project would result in temporarily increased air emissions, possible impacts on special-status wildlife species, disturbance of nesting birds (if present), loss of trees, the introduction and spread of noxious weeds during construction, impacts on cultural resources and tribal cultural resources (if present), impacts related to geologic/soils conditions, impacts on paleontological resources (if present), and temporarily increased noise and vibration levels. However, mitigation measures are included to ensure that impacts are ***less than significant***.

Question B

The potential cumulative impacts of the proposed project have been analyzed within the discussion of each environmental resource area above. Implementation of the mitigation measures identified in Section 1.10 ensures that the project's cumulative impacts are ***less than significant.***

Question C

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

SECTION 5.0 LIST OF PREPARERS

ENPLAN

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City of Mt. Shasta

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Ken Kellogg..... Public Works Director

SECTION 6.0 ABBREVIATIONS AND ACRONYMS

AB	Assembly Bill
APE	Area of Potential Effects
APN	Assessor's Parcel Number
BMP	Best Management Practice
BUG	Backlight, Uplight, and Glare
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standard
CalARP	California Accidental Release Prevention Program
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Code
Cal-IPC	California Invasive Plant Council
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	Criteria Air Pollutant
CARB	California Air Resources Board
CASGEM	California Statewide Groundwater Elevation Monitoring
CBC	California Building Code
CBSC	California Building Standards Code
CCR	California Code of Regulations
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CEC	California Energy Code
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFR	Code of Federal Regulations
CGC	California Government Code
CGS	California Geological Survey
CH_4	Methane
City	City of Mt. Shasta
CIWMA	California Integrated Waste Management Act
CIWMB	California Integrated Waste Management Board
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
County	Siskiyou County
CRHR	California Register of Historical Resources
CRI	Cultural Resources Inventory

CRT	Cathode Ray Tube
CT	Commercial Tourist
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
CY	Cubic Yards
dB	Decibels
dBA	Decibels, A-Weighted
DBH	Diameter at Breast Height
DOC	Department of Conservation
DTSC	Department of Toxic Substances Control
DWSRF	Drinking Water State Revolving Fund
DWR	Department of Water Board
EFH	Essential Fish Habitat
EO	Executive Order
EIR	Environmental Impact Report
F°	Fahrenheit
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Act
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FMMP	California Farmland Mapping and Monitoring Program
GHG	Greenhouse Gas
GSA	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plans
Gwh	Gigawatts Hours
GWP	Global Warming Potential
H_2S	Hydrogen Sulfide
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
I-5	Interstate 5
IBC	International Building Code
IM	Implementation Measure
lbs/day	Pounds per Day
L_{dn}	Day-Night Average Sound Level
L_{eq}	Equivalent Continuous Sound Pressure Level
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MG	Million-Gallon
MGD	Millions Gallons Per Day
mg/m^3	Milligrams per Cubic Meter
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration

MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MS4	Small Municipal Separate Storm Sewer Systems
MT	Metric Tons
MUTCD	California Manual on Uniform Traffic Control Devices
MWP	Master Water Plan
N_2	Nitrogen
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEIC/CHRIS	Northeast Information Center of the California Historical Resources Information System
NF_3	Nitrogen Trifluoride
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
NOI	Notice of Intent
NPDES	National Pollutants Discharge Elimination System
NPPA	California Native Plant Protection Act
NRHP	National Register of Historic Places
NWP	Nationwide Permit
O_2	Oxygen
O_3	Ozone
OHWM	Ordinary High-Water Mark
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Act
Pb	Lead
PFC	Perfluorocarbon
$PM_{2.5}$	Particulate Matter, 2.5 microns in size
PM_{10}	Particulate Matter, 10 microns in size
PPB	Parts per Billion
PPM	Parts per Million
PPV	Peak Particle Velocity
PRC	Public Resources Code
Project	City of Mt. Shasta Spring Hill Water Supply and Storage Project
PVC	Polyvinyl Chloride
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan

ROG	Reactive Organic Gases
ROW	Right-of-Way
RPS	Renewables Portfolio Standard
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SB	Senate Bill
SCAPCD	Siskiyou County Air Pollution Control District
SCOE	Siskiyou County Office of Education
SF_6	Sulfur Hexafluoride
SGMA	Sustainable Groundwater Management Act
SHMA	California Seismic Hazards Mapping Act
SHPO	State Historic Preservation Officer
SMARA	Surface Mining and Reclamation Act
SMARTS	Stormwater Multiple Application and Report Tracking System
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
SRA	State Responsibility Area
SSC	Species of Special Concern
SUSWMP	Standard Urban Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCP	Timberland Conversion Permit
THP	Timber Harvest Plan
THPO	Tribal Historic Preservation Officer
UCMP	U.C. Berkeley Museum of Paleontology
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VMT	Vehicle Miles Traveled
WDR	Waste Discharge Requirement
$\mu g/m^3$	Micrograms per Cubic Meter