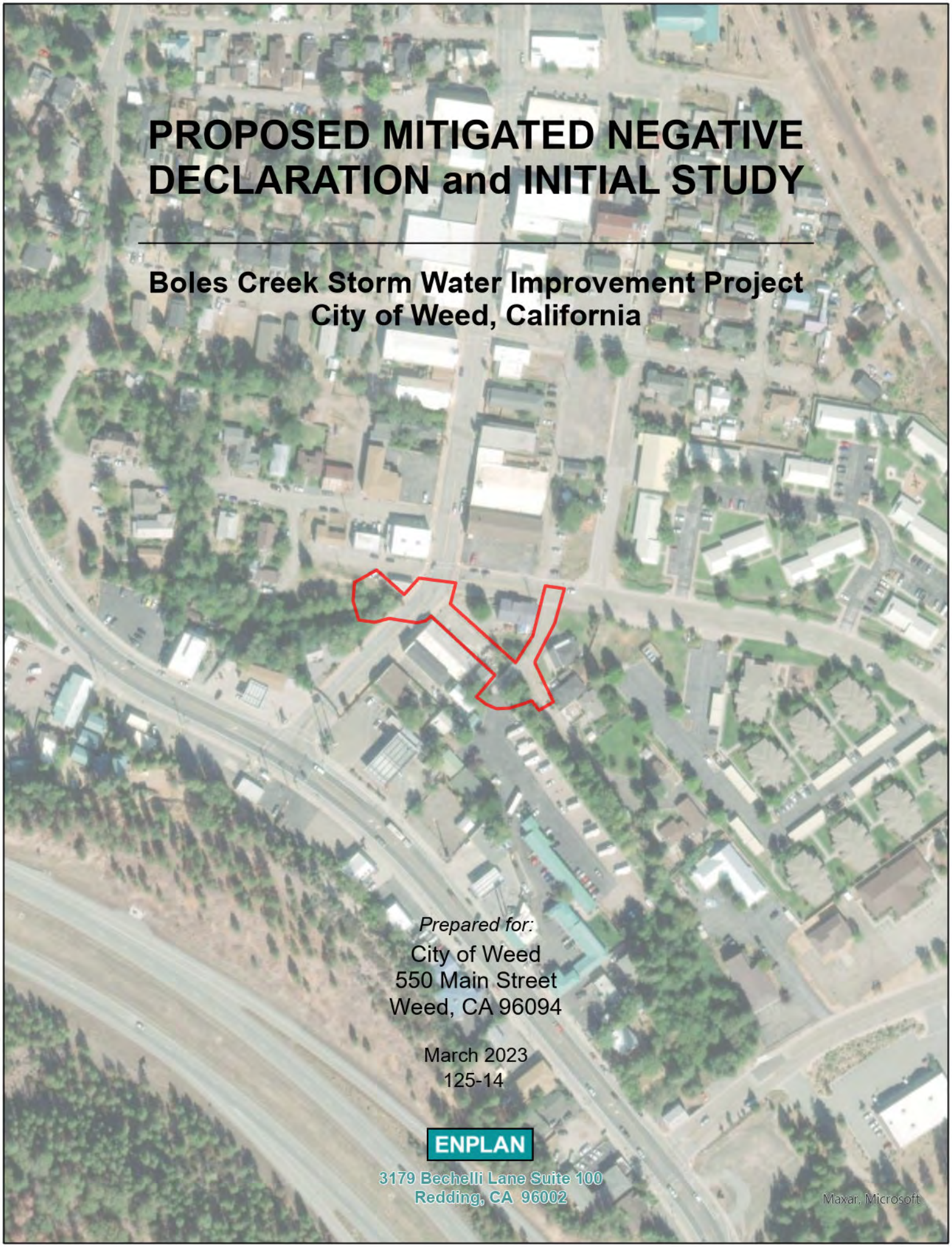
PROPOSED MITIGATED NEGATIVE DECLARATION and INITIAL STUDY

Boles Creek Storm Water Improvement Project
City of Weed, California



Prepared for:

City of Weed
550 Main Street
Weed, CA 96094

March 2023
125-14

ENPLAN
3179 Bechelli Lane Suite 100
Redding, CA 96002

PROPOSED MITIGATED NEGATIVE DECLARATION

LEAD AGENCY:	City of Weed
PROJECT PROPONENT:	City of Weed
PROJECT NAME:	**Boles Creek Storm Water Improvement Project**
PROJECT SUMMARY:	The proposed project includes improvements to Boles Creek drainage structures within the City of Weed. Improvements include replacing/upsizing an undersized concrete channel from Rippon Way to Main Street; constructing a new concrete headwall, approach, and rip-rap side walls; and replacing existing water and sewer utilities within Rippon Way. The purpose of the proposed project is to minimize the potential for flooding and ensure the health and safety of residents living and working in downtown Weed.
LOCATION:	The project is located in the City of Weed, on the east side of Interstate 5 (I-5) and U.S. Route 97, generally south of East Lake Street. Improvements would occur on City-owned property, a public utility easement, and within the public road rights-of-way of Main Street and Rippon Way.

Findings / Determination

As documented in the Initial Study, project implementation could result in aesthetic impacts (tree removal), adversely affect special-status wildlife species and their habitats, disturb nesting migratory birds (if present during project construction), introduce and/or spread noxious weed species, adversely affect subsurface cultural resources and tribal cultural resources (if present), expose the public and the environment to risks associated with hazardous wastes, temporarily increase air emissions, and temporarily increase 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 Weed will adopt mitigation measures as conditions of project approval and will be responsible for ensuring their implementation, it has been determined that the project will not have a significant adverse impact on the environment.

The Final Mitigated Negative Declaration was adopted by the City of Weed City Council on _____, 2023, by Resolution _____.

INITIAL STUDY

BOLES CREEK STORM WATER IMPROVEMENT PROJECT

CITY OF WEED

SISKIYOU COUNTY, CALIFORNIA

LEAD AGENCY:

City of Weed
550 Main Street
Weed, CA 96094
530.938.5020

PREPARED BY:

ENPLAN
3179 Bechelli Lane, Suite 100
Redding, CA 96002
530.221.0440

March 2023

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SECTION 1.0 INTRODUCTION

1.1 PROJECT SUMMARY

Project Title:	**Boles Creek Storm Water Improvement Project**
Lead Agency Name and Address:	**City of Weed** 550 Main Street Weed, CA 96094
Contact Person and Phone Number:	**Tim Rundel, MPA, City Manager** 530.938.5020
Lead Agency's Environmental Consultant:	**ENPLAN** 3179 Bechelli Lane, Suite 100 Redding, CA 96002

1.2 PURPOSE OF STUDY

The City of Weed (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 Boles Creek Storm Water Improvement Project (project). Details about the proposed project are included in Section 3.0 (Project Description) of this Initial Study.

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

The City has received Community Development Block Grant (CDBG) funding for the proposed project through the California Department of Housing and Community Development (HCD). The CDBG program is funded through the U.S. Department of Housing and Urban Development (HUD); therefore, this Initial Study has been prepared to address certain federal environmental regulations (federal cross-cutters), including regulations guiding the General Conformity Rule for the Clean Air Act (CAA), the Federal Endangered Species Act (FESA), and the National Historic Preservation Act (NHPA). These requirements are addressed in Section 4.3 (Air Quality), Section 4.4 (Biological Resources), and Section 4.5 (Cultural Resources) of this Initial Study.

1.3 EVALUATION TERMINOLOGY

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

- **No Impact.** The proposed project will not have any measurable environmental impact on the environment.
- **Less-Than-Significant Impact.** The proposed project has the potential to impact the environment; however, this impact will be below established thresholds of significance.
- **Potentially Significant Impact Unless Mitigation Incorporated.** The proposed project has the potential to generate impacts that 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 may 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**

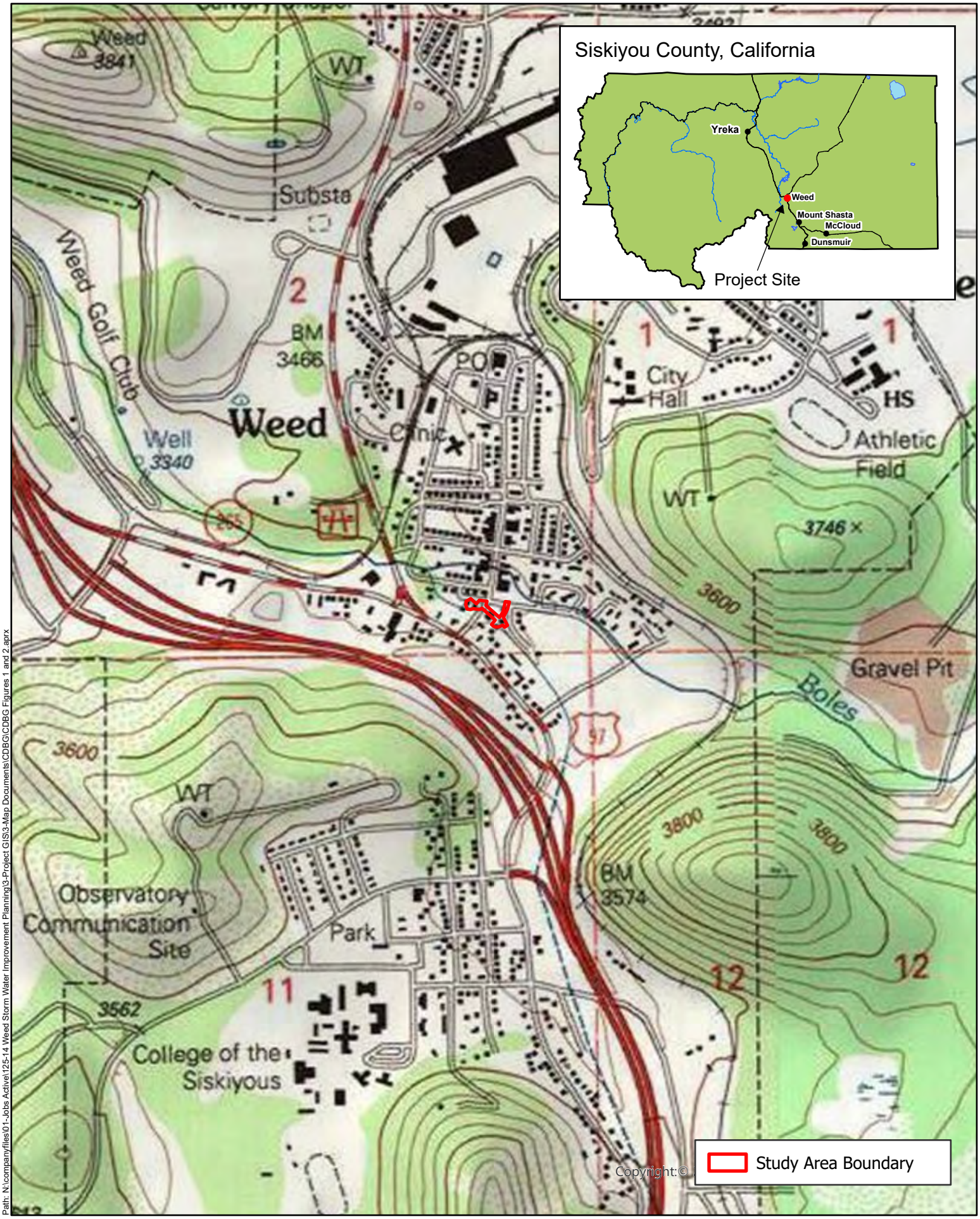
Section 6.0: **Abbreviations and Acronyms**

Appendices: Contains information to supplement Section 4.0.

1.5 PROJECT LOCATION

The proposed project is located in the City of Weed, on the east side of Interstate 5 (I-5) and U.S. Route 97 (US 97), at the intersection of East Lake Street and Main Street. As shown in **Figure 1**, Project Location and Vicinity Map, the project site is in Section 2, Township 41 North, Range 5 West, of the U.S. Geological Survey (USGS) Weed 7.5-minute quadrangle. Latitude 41° 25' 21" N; Longitude -122° 23' 05" W (centroid).

Improvements would occur on City-owned property (Assessor's Parcel Numbers (APNs) 060-321-080, -100, and -110), public utility easements on private property (APNs 060-322-020 and 060-331-070), and within the public road rights-of-way (ROWs) of Main Street and Rippon Way. Temporary staging of construction materials and equipment would occur within the ~0.62-acre study area. An aerial photograph of the project site is provided in **Figure 2**.



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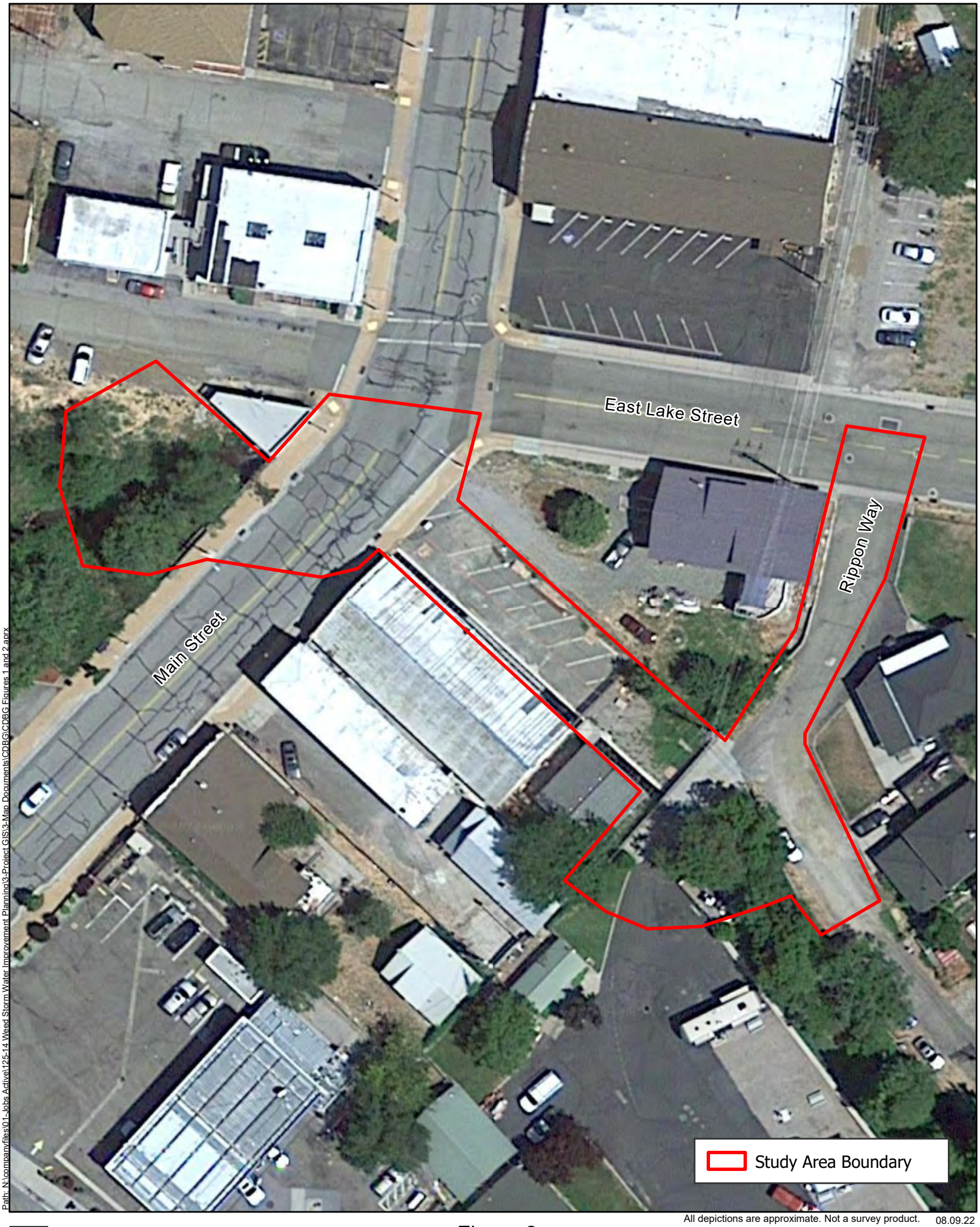
All depictions are approximate. Not a survey product. 08.09.22

0 1,000 Feet

Figure 1

Project Vicinity Map

ENPLAN



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All depictions are approximate. Not a survey product. 08.09.22

0 50 Feet

Figure 2

Project Site Overview

ENPLAN

1.6 ENVIRONMENTAL SETTING

General Plan Designations:	Retail Commercial (RC) and General Commercial (GC)
Zoning:	Retail Commercial (C1)
Surrounding Land Uses:	Land uses surrounding the project site are primarily commercial; some residential development is present along Rippon Way and the Boles Creek corridor is undeveloped.
Topography:	Elevations in the study area range from ~3,430 to ~3,450 feet above sea level. The study area is relatively flat, with the exception of steep banks along Boles Creek. The overall topographical gradient of the site slopes gradually downward towards the west.
Plant Communities/Wildlife Habitats:	Habitat types in the study area include riverine and urban. Riverine habitat includes Boles Creek. Representative vegetation along Boles Creek includes white alder, black locust, willows, Himalayan blackberry, periwinkle, buttercups, and various grasses. The urban community includes commercial development along Main Street and East Lake Street, and residential development along Rippon Way with some ornamental/horticultural trees interspersed with native species. *See Section 4.4 (Biological Resources)*
Climate:	The study area is characterized as Mediterranean, with cool, moist winters and warm, dry summers. Annual precipitation averages ~23.66 inches, as measured near the Weed airport; the average daily maximum July temperature is 85 degrees Fahrenheit (°F), and the average daily minimum January temperature is 24 °F (U.S. Climate Data, 2022).

1.7 TRIBAL CULTURAL RESOURCES CONSULTATION

Public Resources Code (PRC) §21084.2 (AB 52, 2014) establishes that *"a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment."* Pursuant to PRC §21080.3.1, in order to determine whether a project may have such an effect, a lead agency is required to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if:

1. The tribe requested 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.

According to the City of Weed, as of January 20, 2022, no tribes have requested formal notification of proposed projects in the geographical area.

As discussed in Section 4.5, in response to ENPLAN's request for information, on June 17, 2022, the Native American Heritage Commission (NAHC) responded by email that they received ENPLAN's request and the results from a search of its Sacred Lands File would be delayed. Therefore, contact with Native American representatives and organizations was made based on a list of contacts sent by the NAHC for another project in the vicinity. On June 26, 2022, ENPLAN contacted the Native American representatives previously identified by the NAHC with a request to provide comments on the proposed project. Follow-up telephone calls were placed on May 3, 2022, to these representatives.

Responses were received from Alex Watts-Tobin of the Karuk Tribe and Mark Miyoshi of the Winnemem Wintu. Alex Watts-Tobin did not have any information to share regarding the project. Mark Miyoshi stated that the project is not within the traditional Winnemem Wintu Tribal territory.

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

1.8 REGULATORY REQUIREMENTS

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

City of Weed:

- Adoption of a Mitigated Negative Declaration pursuant to CEQA.
- Adoption of a Mitigation Monitoring and Reporting Program for the project that incorporates the mitigation measures identified in this Initial Study.
- Approval of an Encroachment Permit for work in the public road right-of-way.
- Approval of a Water Pollution Control Plan pursuant to the City's standard construction measures for project with less than 1 acre of ground disturbance.

U.S. Department of the Army, Corps of Engineers:

- Section 404 Permit under the Federal Clean Water Act

State Water Resources Control Board (SWRCB)/North Coast Regional Water Quality Control Board (NCRWQCB):

- Section 401 Water Quality Certification
- Coverage under the National Pollutant Discharge Elimination System (NPDES) permit for *Discharges of Storm Water Runoff Associated with Construction Activity* (currently Order No. 2009-009-DWQ, amended by 2010-0014-DWQ and 2012-0006-DWQ). Permit coverage may be obtained by submitting a Notice of Intent to the SWRCB. The permitting process requires the development and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) to reduce pollutants and any additional controls necessary to meet water quality standards.
- If construction dewatering activities result in the direct discharge of relatively pollutant-free wastewater, coverage under NCRWQCB General Order R1-2015-0003 (NPDES No. CAG0024902) *Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region*. This Order includes specific requirements for monitoring, reporting, and implementing Best Management Practices (BMPs) for construction dewatering activities. 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.

California Department Fish and Wildlife (CDFW):

- Issuance of a Section 1600 Lake or Streambed Alteration Agreement.

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

- Because a Section 404 permit is required for the proposed project, consultation regarding potential impacts to cultural resources may be required pursuant to Section 106 of the National Historic Preservation Act (NHPA).

1.9 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

☒ 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 SUMMARY OF MITIGATION MEASURES

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

AESTHETICS

MM 4.1.1 All trees removed to facilitate project construction shall be replaced upon completion of construction. Riparian tree species may be planted in the riprap adjacent to the culvert inlet and outlet, or at other locations deemed appropriate by the City of Weed. The replacement trees shall be planted in the fall following completion of construction. Use of pole cuttings or rooted individuals is preferred, as is the use of tree species native to the project area. Planting shall occur at a minimum 1:1 ratio (trees planted: trees removed), but may be at a higher ratio to ensure success. The planted trees shall be monitored on an annual basis for a minimum of five years or until the required minimum number of replacement trees is fully established, with no further need for human intervention. If the replacement trees die prior to becoming established, they shall be replanted, and monitoring shall continue until success is achieved.

MM 4.1.2 If trenching or excavation must occur within the dripline of any trees planned for retention, the work shall be overseen by a certified arborist. The arborist shall ensure that large roots encountered during excavation are cleanly cut, and shall make other recommendations as necessary to ensure that the trees are not adversely affected by the construction activities.

AIR QUALITY

MM 4.3.1 The following measures shall be implemented throughout construction:

a. All material excavated, stockpiled, or graded shall be covered or sufficiently watered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of ambient air quality standards. Watering shall occur at least twice daily with

complete site coverage, preferably in the mid-morning and after work is completed each day.

b. All material transported offsite shall be either sufficiently watered or securely covered to prevent a public nuisance.

c. All areas (other than paved roads) with vehicle traffic shall be watered periodically or have dust palliatives applied for stabilization of dust emissions.

d. All on-site vehicles shall be limited to a speed of 15 miles per hour on unpaved 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. This provision is enforced by local law enforcement agencies.

g. Paved streets in and adjacent to the construction site shall be swept or washed at the end of the day to remove excessive accumulations of silt and/or mud resulting from activities on the development site.

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

BIOLOGICAL RESOURCES

MM 4.4.1 In order to avoid impacts to nesting birds and raptors protected under the federal Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5, including their nests and eggs, one of the following shall be implemented:

a. Vegetation removal and other ground-disturbance activities associated with construction shall occur between September 1 and January 31 when birds are not nesting; or

b. If vegetation removal or ground disturbance activities occur during the nesting season, a pre-construction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area.

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 survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

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

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

- Minimize the construction disturbance to riparian habitat along Boles Creek through careful pre-construction planning.

- Install high-visibility fencing, flagging, or other markers along the outer edges of the construction zone where needed to prevent accidental entry into riparian habitat and jurisdictional waters. The fencing location shall be determined by a qualified biologist in consultation with the project engineer and the City of Weed. No construction activities (e.g., clearing, grading, trenching, etc.), including vehicle parking and materials stockpiling, shall occur within the fenced area. The exclusionary fencing shall be periodically inspected during construction activities to ensure the fencing is properly maintained. The fencing shall be removed upon completion of work.
- Stockpile equipment and materials outside of riparian habitat, in the designated staging areas.
- Prune any riparian plants at ground level where feasible (as opposed to mechanically removing the entire plant and root system) in temporary use areas, which will promote regeneration from the root systems.

MM 4.4.3 The potential for introduction and spread of noxious weeds shall 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 equipment at a commercial wash facility prior to entering the job site and upon leaving the job site.

CULTURAL RESOURCES

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 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.

HAZARDS AND HAZARDOUS MATERIALS

MM 4.9.1 Prior to construction, soil and groundwater samples shall be collected from areas planned for excavation. The samples shall be analyzed to identify potentially hazardous materials. If contaminants are present at levels that exceed regulatory agency thresholds, a management plan shall be prepared to identify how soil and groundwater encountered during excavation will be handled and disposed, and shall be implemented during the project construction phase. All such work shall be conducted by a qualified professional in consultation with North Coast Regional Water Quality Control Board and/or Siskiyou County Environmental Health Division staff.

MM 4.9.2 If, during construction, any signs of hazardous materials or soil contamination (e.g., stained, discolored, or odorous soil) are uncovered, discovered, or otherwise detected or observed, construction activities in the affected area shall cease, and the City shall be immediately contacted.

The City, in consultation with North Coast Regional Water Quality Control Board and/or Siskiyou County Environmental Health Division staff, shall advise the contractor of the appropriate measures for containment, testing, and removal of the suspect material, in accordance with federal, State and local laws and regulations. Construction work in the affected area shall not resume until the City has determined that all required corrective measures have been satisfied.

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 the daytime hours of 7:00 A.M. to 7:00 P.M., Monday through Saturday. Construction activities shall be prohibited on Sundays and federal/state recognized holidays. Exceptions to these limitations may be approved by the City of Weed 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 farthest practical distance from nearby noise-sensitive land uses.

TRIBAL CULTURAL RESOURCES

Implementation of **Mitigation Measures 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 is required.

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

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Ken Palfini
City of Weed, Mayor

3/21/23
Date

SECTION 3.0 PROJECT DESCRIPTION

3.1 PROJECT BACKGROUND, NEED, AND OBJECTIVES

According to the City of Weed 2007 Drainage Study prepared by PACE Engineering, Inc., flooding along Boles Creek in the downtown area of Weed has been a concern of City officials and residents for many years. Most of the flooding has occurred in the section between Grove Street and the open channel approximately 200 feet upstream of Main Street (the current project site is at the upstream end of this area). Although improvements to Boles Creek drainage structures from Grove Street to Main Street were completed in 2004, the section from Rippon Way to the east side of Main Street remains undersized and unable to carry the 100-year flows calculated by the Federal Emergency Management Agency (FEMA). Additionally, future development in the South Weed area would increase runoff into Boles Creek, exacerbating the existing flooding problems in the downtown area. Therefore, upsizing the existing concrete channel to be able to carry 100-year flood flows is necessary to reduce existing and future flood hazards. The purpose of the proposed project is to minimize flood hazards and ensure the health and safety of residents living and working in downtown Weed. A detailed description of the improvements is provided in Section 3.2 (Project Components/Physical Improvement).

For purposes of this Initial Study, "study area" and "project site" shall mean the project footprint, which includes access roads, staging areas, and areas in which improvements are proposed.

3.2 PROJECT COMPONENTS / PHYSICAL IMPROVEMENTS

The proposed project would enhance the passage of Boles Creek flood flows through downtown Weed. Improvements include replacing an existing undersized concrete channel with a new 8-foot by 5-foot concrete box culvert from Rippon Way to the east side of Main. The new box culvert would be approximately 170 feet long, and would be installed parallel to and on the northern side of the existing concrete channel in order to keep water flowing during construction and to minimize impacts to buildings adjacent to the existing channel. The box culvert would tie into an existing concrete arch culvert that flows under Main Street via a concrete transition structure. A new concrete headwall, approach, and riprap side walls would be provided at the inlet to transition the natural stream channel into the box culvert. Riprap banks would also be required at the Main Street culvert outlet to prevent erosion. An existing sewer utility pipe as well as concrete retaining walls and road surface would be removed and replaced within Rippon Way to accommodate installation of the headwall and box culvert. An existing water main currently located beneath the existing channel would be rerouted to run over the new box culvert. The new box culvert would be installed primarily within an existing paved parking lot; paved areas disturbed during construction would be re-paved following completion of the improvements. The maximum depth of excavation would be ~6 feet along the box culvert and ~14 feet for replacement of the sewer main. Project plans are provided in **Appendix A**.

Access to the work areas would be from paved public roads. Temporary staging of construction materials and equipment would occur within the project study area.

SECTION 4.0 ENVIRONMENTAL IMPACT ANALYSIS

4.1 AESTHETICS

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

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
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 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 Weed

The City's General Plan includes the following Objectives, Policies, and Programs related to aesthetics that are applicable to the proposed project:

Community Design Element		
Objectives	CD 1.5	Protect the City's scenic views.
Policies	CD 1.5.1	Preserve the City's natural landscape for residents and visitors to enjoy.
Open Space Element		
Objectives	OS 3.2	Identify and protect scenic resources and viewsheds.
Programs	OS 3.2.1.1	Identify and assess scenic resources and viewsheds.

Conservation Element		
Policies	CO 4.1.1	New projects shall have carefully planned roads, cuts and fills, building foundations, and septic systems to avoid damage to tree roots.
	CO 4.1.2	For new projects, the City shall require that roads and utility services be consolidated to minimize the environmental impact of development. The City should also require reseeding any disturbed ground.
	CO 4.1.3	Trees that were removed during construction shall be replaced.
Program	CO 4.1.3.1	Develop a 5-year Monitoring Plan for replaced trees, including maintenance and replacement of trees that do not thrive.

DISCUSSION OF IMPACTS

Questions A and C

Scenic vistas are defined as expansive views of highly valued landscapes from publicly accessible viewpoints. Scenic vistas include views of natural features such as mountains, hills, valleys, water courses, outcrops, and natural vegetation, as well as man-made scenic structures. Scenic resources in the project area include Mt. Shasta, trees and other vegetation, open space, and forested hills. The project area is visible to individuals living and working in the area and to travelers on adjacent roadways.

The project includes replacing and upsizing the existing concrete channel with a new 8-foot by 5-foot concrete box culvert in the same general location. The culvert would be under an existing paved area; because the pavement would be replaced following completion of work, aesthetic impacts of the culvert would be negligible. A new headwall would be constructed at the box culvert inlet, and riprap would be placed at both the inlet and outlet. This work would occur in the incised stream channel and would not change the visual character of the area.

Approximately three mature trees would be removed to facilitate construction of the proposed improvements. In accordance with City policies, and as provided in **Mitigation Measure (MM) 4.1.1**, trees would be planted in the project area upon completion of construction, and would be monitored over a five-year period to ensure success of the planting effort. Additionally, excavations would be managed to avoid damaging the roots of trees to be retained on the project site, as called for under **MM 4.1.2**.

The proposed project would not conflict with applicable zoning. Provided that trees are replanted following completion of construction, the project would not conflict with other regulations governing scenic quality.

The proposed project would have short-term visual impacts during construction due to earthwork, and the staging of construction equipment and materials. However, this is a minor, temporary impact and would cease when the project is complete. Therefore, with implementation of **MM 4.1.1 and 4.1.2**, both the construction-related and long-term effects of the proposed project with respect to aesthetics would be less than significant.

Question B

There are currently no officially designated State Scenic Highways in Siskiyou County. Therefore, there would be no impact.

Question D

The proposed project would not include the installation of permanent lighting or introduce new sources of glare. Temporary lighting is not expected to be used during project construction because work would be limited to daytime hours in accordance with City standards (see **MM 4.13.1)**. Any lighting that may be used during project construction, or glare that may be produced, would be minimal and would not adversely affect motorists or nearby residents.

CUMULATIVE IMPACTS

Potential cumulative projects in the area include growth according to the build-out projections in the City of Weed General Plan. These projects may contribute to the need for tree removal and other activities affecting aesthetic resources. Because trees would be replaced in accordance with City policy, tree removal would not contribute to a significant cumulative impact. No other elements of the proposed project would contribute to a significant permanent change to the visual character of the area, and no new sources of light or glare would be created. Therefore, the project would not contribute to cumulatively considerable aesthetic impacts.

MITIGATION

MM 4.1.1 All trees removed to facilitate project construction shall be replaced upon completion of construction. Riparian tree species may be planted in the riprap adjacent to the culvert inlet and outlet, or at other locations deemed appropriate by the City of Weed. The replacement trees shall be planted in the fall following completion of construction. Use of pole cuttings or rooted individuals is preferred, as is the use of tree species native to the project area. Planting shall occur at a minimum 1:1 ratio (trees planted: trees removed), but may be at a higher ratio to ensure success. The planted trees shall be monitored on an annual basis for a minimum of five years or until the required minimum number of replacement trees is fully established, with no further need for human intervention. If the replacement trees die prior to becoming established, they shall be replanted, and monitoring shall continue until success is achieved.

MM 4.1.2 If trenching or excavation must occur within the dripline of any trees planned for retention, the work shall be overseen by a certified arborist. The arborist shall ensure that large roots encountered during excavation are cleanly cut, and shall make other recommendations as necessary to ensure that the trees are not adversely affected by the construction activities.

DOCUMENTATION

Caltrans. 2019. California State Scenic Highway Mapping System. Siskiyou County. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed January 2022.

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed January 2022.

4.2 AGRICULTURE AND FOREST RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
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

FEDERAL

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 California Farmland Mapping and Monitoring Program (FMMP) was established in 1982 to provide data to decision makers to assist them in making informed decisions for the best utilization of California's farmland. Under the FMMP, the Department of Conservation (DOC) is responsible for mapping, monitoring, and reporting on the conversion of the State's farmland to and from agricultural use. 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.

Public Resources Code (PRC) §12220(g)

PRC §12220(g) defines forest land as land that can support ten 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.

Z'berg-Nejedly Forest Practice Act of 1973

Timberland in California is managed under the provisions of the Z'Berg-Nejedly Forest Practice Act of 1973 (PRC §4511 *et seq.*). 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."*

California Department of Forestry and Fire Protection (CAL FIRE) has oversight responsibility for timberland in the State. When a landowner converts timberland to non-timber uses (agricultural, residential, commercial, etc.), the owner must file a Timberland Conversion Permit with CAL FIRE. In addition, a Timber Harvesting Permit from CAL FIRE is required for tree cutting on non-federal lands in the following circumstance:

1. The land meets the definition of timberland pursuant to PRC §4526 **AND**
2. The trees are sold, traded, bartered, or exchanged; **OR** the area in which the trees were cut is developed with another use (e.g., house, commercial/industrial building, vineyard, etc.).

With certain limitations, some types of timber operations are exempt from the requirement to prepare a Timber Harvesting Plan (THP) (e.g., harvesting dead, dying, or diseased trees, removing trees to eliminate fire fuels within 150 feet of an existing structure, etc.). A Conversion Exemption is provided for areas less than three acres.

California Timberland Productivity Act of 1982

The Timberland Productivity Act of 1982 (Government Code §51104) defines timberland as privately owned land, or land acquired for state forest purposes, which is devoted to and used for growing and harvesting timber, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre. The Act established Timberland Production Zones (TPZs) for the purpose of discouraging the premature conversion of timberland to other uses. TPZs are rolling ten-year contracts that provide preferential tax assessments to qualified timberlands. Government Code §51104(g) defines TPZ 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 Weed

The City's General Plan includes the following Policies and Programs related to agriculture and forest resources that are applicable to the proposed project:

Conservation Element		
Policies	CO 4.1.1	New projects shall have carefully planned roads, cuts and fills, building foundations, and septic systems to avoid damage to tree roots.
	CO 4.1.2	For new projects, the City shall require that roads and utility services be consolidated to minimize the environmental impact of development. The City should also require reseeding any disturbed ground.
	CO 4.1.3	Trees that were removed during construction shall be replaced.
Program	CO 4.1.3.1	Develop a 5-year Monitoring Plan for replaced trees, including maintenance and replacement of trees that do not thrive.

DISCUSSION OF IMPACTS

Questions A, B, and D

According to the *Important Farmland in California* map published by the FMMP, areas in which improvements would occur are not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. According to the City's Zoning Maps, area in which improvements are

proposed are not currently zoned for agricultural production. In addition, no properties in the project area are subject to a Williamson Act contract.

Because the proposed project would not affect Prime Farmland, Unique Farmland, or Farmland of Statewide Importance and would not conflict with agricultural zoning or a Williamson Act contract, there would be no impact.

Question C

According to the City's General Plan and Zoning Map, the project site and surrounding area are not designated as timberland and are not zoned for timberland production. Therefore, the proposed project would have no impact on timberland or cause rezoning 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 project site and surrounding area do not qualify as "forest land" as defined by PRC §12220(g) because the land is in an urban setting and cannot be managed for forest resources. Likewise, the project site and surrounding area do not qualify as "timberland" as defined by PRC §4526 because the land is not capable of producing a crop of trees of any commercial tree species. Further, the site and surrounding area are not timberland zoned for Timberland Production (as defined by Government Code §51104(g). Therefore, the proposed project would not result in the loss of forest lands or the conversion of forest lands to non-forest uses. There would be no impact.

As discussed above under Section 4.1 (Aesthetics), in accordance with City policy and **MM 4.1.1**, trees removed to facilitate project construction would be replaced at a minimum 1:1 ratio upon completion of construction.

CUMULATIVE IMPACTS

Potential cumulative projects in the area include growth according to the build-out projections in the City of Weed General Plan. As documented above, the proposed project would have no effect on farmland or forest land. Therefore, the proposed project would not contribute to cumulatively considerable impacts on farmlands or forest lands.

MITIGATION

None necessary.

DOCUMENTATION

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed January 2022.

State of California, Department of Conservation. 2016. Important Farmland Finder. https://maps.conservation.ca.gov/dlrp/ciff/. Accessed January 2022.

4.3 AIR QUALITY

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
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, establishes maximum ambient concentrations for criteria air pollutants (CAP), known as the National Ambient Air Quality Standards (NAAQS). The NAAQS are designed to protect the health and welfare of the populace with a reasonable margin of safety. **Table 4.3-1** identifies the seven CAPs as well as characteristics, health effects, and typical sources for each CAP:

TABLE 4.3-1
Federal Criteria Air Pollutants

Pollutant	Characteristics	Primary Effects	Major Sources
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.
Carbon Monoxide (CO)	Carbon monoxide is an odorless, colorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline and wood.	• 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 consists 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.
Lead	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.

STATE

State Ambient Air Quality Standards

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

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

Sulfate (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
Ozone (O_3)	8 Hour	0.070 ppm (137µg/m^3)	0.070 ppm (137µg/m^3)
	1 Hour	0.09 ppm (180 µg/m^3)	–
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)
Sulfur Dioxide (SO_2)	24 Hour	0.04 ppm (105 µg/m^3)	0.14
	3 Hour	–	–
	1 Hour	0.25 ppm (665 µg/m^3)	75 ppb (196 µg/m^3)
	Annual Arithmetic Mean	–	0.030 ppm
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	–
	24 Hour	50 µg/m^3	150 µg/m^3
Particulate Matter – Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3
	24 Hour	–	35 µg/m^3
Sulfates	24 Hour	25 µg/m^3	–
Lead	Calendar Quarter	–	1.5 µg/m^3
	30 Day Average	1.5 µg/m^3	–
	Rolling 3-Month Average	None	0.15 µg/m^3
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	–
Vinyl Chloride (chloroethene)	24 Hour	0.01 ppm (26 µg/m^3)	–
Visibility-Reducing Particles	8 Hour	–	–

Source: CARB 2016. Notes: mg/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.). TACs are regulated under the California CAA. A “hot spot” is an area where air toxics levels are higher than in the overall region, which may be caused by emissions from a specific facility.

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

In-Use Off-Road Diesel-Fueled Fleets Regulation

CARB adopted the In-Use Off-Road Diesel-Fueled Fleets Regulation to reduce NO_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 Regulation requires that fleets meet an increasingly stringent set of fleet average targets, culminating in 2023 for large and medium fleets, and in 2028 for small fleets. The most stringent fleet average target generally corresponds to a 2012 model year, or a Tier 3 average standard (CARB, 2022c).

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

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

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

CARB estimates that from 2024 through 2038, the amendments will generate an additional reduction above and beyond the current regulation of approximately 31,087 tons of NO_X and 2,717 tons of $PM_{2.5}$. About half of those additional reductions are expected to be realized within the first five years of implementation.

LOCAL

Siskiyou County Air Pollution Control District (SCAPCD)

The Siskiyou County Air Pollution Control District (SCAPCD) is responsible for enforcing federal and state air quality regulations in Siskiyou County. 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 (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.

City of Weed

The City's General Plan includes the following Goals, Objectives, and Policies related to air quality that are applicable to the proposed project:

Air Quality Element		
Goal	AQ 1	Clean air for residents and visitors.
Objective	AQ 1.1	Protect and improve local air quality.
Policy	AQ 1.1.1	The City shall maintain attainment status for all state and federal mandated criteria air pollutants.

DISCUSSION OF IMPACTS

Questions A and B

Although Siskiyou County is not required to have a local air quality attainment plan, 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 2020.4.0 of the California Emissions Estimator Model (CalEEMod). CalEEMod provides default values when site-specific inputs are not available. CalEEMod does not directly calculate ozone emissions. Instead, the 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, use of construction equipment, material hauling, trenching, and re-paving.
- Construction would start in 2023 and occur over a period of approximately one year.
- 300 cubic yards (CY) of material would be imported; 400 CY would be exported.
- The total area to be paved/re-paved would be 0.09 acres.
- The total weight of demolition debris (primarily asphalt and concrete) to be removed from the project site would be approximately 110 tons.

Other site-specific inputs and assumptions, as well as the resulting emission calculations, are provided in **Appendix B**. 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 neither the City of Weed nor the SCAPCD have adopted specific thresholds for construction-related emissions, the City typically references current SCAPCD rules, including Rule 6.1 (Construction Permit Standards for Criteria Pollutants), which includes thresholds for new or modified stationary sources. As stated under Regulatory Context above, for stationary sources, the SCAPCD has defined 250 pounds (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.

TABLE 4.3-3
Projected Construction Emissions

Pollutants of Concern						
Year	**ROG**	**NO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**
	Maximum lbs/day	Maximum lbs/day	Maximum lbs/day	Maximum lbs/day	Maximum lbs/day	Maximum lbs/day
2023	0.98	10.31	5.1	2.9	7.89	0.02

Source: CalEEMod, 2022.

Table 4.3-3 shows the highest daily levels of project construction emissions regardless of construction phase. As shown, construction of the proposed project would not exceed SCAPCD thresholds for stationary source emissions. In addition, as stated under Regulatory Context, the In-Use Off-Road Diesel-Fueled Fleets Regulation was most recently updated on November 17, 2022, and require fleets to phase-out use of the oldest and highest polluting off-road diesel vehicles in California earlier or beyond what is required of fleets in the previous regulation. The updated regulations also require the use of renewable diesel in off-road diesel vehicles. The amended regulations will be phased in starting in 2024 through the end of 2036. CARB estimates that from 2024 through 2038, the amendments will generate an additional reduction above and beyond the current regulation of approximately 31,087 tons of NO_X and 2,717 tons of $PM_{2.5}$. About half of those additional reductions are expected to be realized within the first five years of implementation. Because daily construction emissions would be lower than the SCAPCD thresholds for stationary source emissions, construction emissions would be less than significant.

Operational Emissions
The project does not include any components that would increase operational emissions over existing conditions.

Neither construction nor operation of the proposed project would 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, there is no potential for lead emissions.

Hydrogen Sulfide. Hydrogen sulfide is formed during the decomposition of organic material in anaerobic environments, including sewage treatment processes. The proposed project would not result in an increase in wastewater generation; therefore, there is no potential for an increase in hydrogen sulfide emissions.

Vinyl Chloride. Vinyl chloride is used to manufacture PVC plastic and other vinyl products. Approximately 98 percent of vinyl chloride produced in the United States is used during the manufacture of PVC. Additionally, vinyl chloride is produced during the microbial breakdown of chlorinated solvents (e.g., engine cleaner, degreasing agent, adhesive solvents, paint removers, etc.). The potential for vinyl chloride exposure is primarily limited to areas in close proximity to PVC production facilities. Project implementation would not result in vinyl chloride emissions.

Visibility-Reducing Pollutants. Visibility-reducing pollutants generally consist of sulfates, nitrates, organics, soot, fine soil dust, and coarse particulates. These pollutants contribute to the regional haze that impairs visibility, in addition to affecting public health. According to the California Regional Haze Management Plan, natural wildfires and biogenic emissions are the

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

Therefore, impacts would be less than significant because the proposed project would not exceed the SCAPCD thresholds during construction, does not have any components that would increase long-term operational emissions, and would not result in significant impacts associated with ozone, lead, hydrogen sulfide, vinyl chloride, or visibility-reducing particles.

Question C

See discussion under Questions A and B. Sensitive receptors are individuals or groups of people that are more affected by air pollution than others, including young children, elderly people, and people weakened by disease or illness. Locations that may contain high concentrations of sensitive receptors include residential areas, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes. As stated above, the proposed project does not have any components that would result in long-term operational emissions. The proposed project includes construction activities adjacent to single-family residences on Rippon Way and residential apartments on West Lake Street.

As discussed above, the proposed project would generate PM_{10} and other pollutants during construction. Although these emissions would cease with completion of construction work, sensitive uses adjacent to the construction area could be exposed to elevated dust levels and other pollutants. Compliance with federal, state, and local regulations, and implementation of **Mitigation Measure MM 4.3.1** would reduce impacts to a less-than-significant level.

Question D

The project does not include any components that would result in the generation of long-term odors or similar emissions adversely affecting a substantial number of people. Construction activities that have the potential to emit odors and similar emissions include operation of diesel equipment, generation of fugitive dust, and paving (asphalt). Odors and similar emissions from construction are intermittent and temporary, and generally would not extend beyond the construction area. Due to the temporary and intermittent nature of construction odors, impacts during construction would be less than significant.

CUMULATIVE IMPACTS

By its very nature, air pollution is largely a cumulative impact. If a project's individual emissions contribute toward exceedance of the NAAQS or the CAAQS, then the project's cumulative impact on air quality would be considered significant. In developing attainment designations for criteria pollutants, the USEPA considers the region's past, present, and future emission levels. In addition, local air districts determine suitable significance thresholds based on an area's designated nonattainment status, which also considers the region's past, present, and future emissions levels.

Implementation of the proposed project combined with future development in the 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 CARB and SCAPCD regulations 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 with complete site coverage, preferably in the mid-morning and after work is completed each day.

b. All material transported offsite shall be either sufficiently watered or securely covered to prevent a public nuisance.

c. All areas (other than paved roads) with vehicle traffic shall be watered periodically or have dust palliatives applied for stabilization of dust emissions.

d. All on-site vehicles shall be limited to a speed of 15 miles per hour on unpaved 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. This provision is enforced by local law enforcement agencies.

g. Paved streets in and adjacent to the construction site shall be swept or washed at the end of the day to remove excessive accumulations of silt and/or mud resulting from activities on the development site.

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

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4.4 BIOLOGICAL RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
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 Boards (RWQCB) regulate waters of the

State and have a policy of no-net-loss of wetlands. As a condition of water quality certification, the RWQCBs typically require mitigation for impacts to wetlands.

Federal Endangered Species Act (FESA)

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

Federal Migratory Bird Treaty Act

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

Fish and Wildlife Conservation Act

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

Bald and Golden Eagle Protection Act

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

Magnuson-Stevens Fishery Conservation and Management Act

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

STATE

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. The 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 Act

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

LOCAL

City of Weed

The City of Weed's General Plan includes the following Goals, Objectives, Policies, and Programs related to biological resources that are applicable to the proposed project:

Conservation Element		
Goals	CO 3	A community with a thriving natural habitat.
	CO 5	A balanced community between nature and the built environment.
Objectives	CO 3.1	Protect state and federally listed candidate, threatened, and endangered species that reside within city limits.
	CO 3.2	Preserve open space for habitat conservation. Maintain biodiversity in plant communities and wildlife habitats.
Policies	CO 3.1.1	Comply with federal and state legislation regarding the protection of special-status species and habitats as defined by the U.S. Fish and Wildlife Service.
	CO 4.1.1	New projects shall have carefully planned roads, cuts and fills, building foundations, and septic systems to avoid damage to tree roots.
	CO 4.1.2	For new projects, the City shall require that roads and utility services be consolidated to minimize the environmental impact of development. The City should also require reseeding any disturbed ground.
	CO 4.1.3	Trees that were removed during construction shall be replaced.
	CO 5.1.1	Preserve habitat linkages to provide wildlife corridors and protect natural wildlife ranges by prohibiting development in designated biological resource zones.

	CO 5.2.1	Invest in landscaping public facilities with native or drought tolerant plants where possible to reduce or eliminate the need for irrigation while enhancing the environment with biodiverse vegetation.
	CO 5.2.2	The City shall plant large canopy shade trees where appropriate and with consideration to natural habitats and water conservation goals, to maximize environmental benefits.
Programs	CO 3.2.1.1	Conduct biological resources assessments by a qualified biologist to inventory wildlife habitats, corridors, and restoration needs.
	CO 4.1.3.1	Develop a 5-year Monitoring Plan for replaced trees, including maintenance and replacement of trees that do not thrive.
	CO 5.1.1.1	Require evaluation, avoidance, and minimization of potential significant impacts as well as mitigation of unavoidable impacts to biological resources.
	CO 5.2.2.1	Integrate urban forestry into the City by planting trees and managing storm runoff.

DISCUSSION OF IMPACTS

Questions A and B

ENPLAN evaluated the potential for project implementation to adversely affect special-status species and sensitive habitats through records searches and a field evaluation. The records searches included a review of California Natural Diversity Data Base (CNDDB) records for special-status plants and wildlife; California Native Plant Society (CNPS) records for special-status plant species; federal records for listed, proposed, and candidate plant and wildlife species under jurisdiction of the USFWS and National Marine Fisheries Service (NMFS); critical habitat data maintained by the USFWS and NMFS; and EFH data maintained by the NMFS. Record search results are provided in **Appendix C**.

Botanical and wildlife field surveys of the study area were conducted by an ENPLAN biologist on March 22, 2022. Most of the special-status species would not have been evident at the time the fieldwork was conducted; however, determination of their potential presence could readily be made based on observed habitat characteristics.

Special-Status Plant Species

Review of the USFWS species lists for the project area did not identify any federally listed or candidate plant species as potentially being affected by the proposed project. The project site does not contain designated critical habitat for federally listed plant species.

CNDDB records show that no special-status plant species have been previously reported in the project area. Thirteen special-status plants have been reported within a five-mile radius of the study area: alkali hymenoxys, coast fawn lily, Henderson's triteleia, Modoc green-gentian, Oregon fireweed, pallid bird's-beak, Peck's lomatium, Pickering's ivesia, rosy orthocarpus, Shasta chaenactis, snow fleabane daisy, subalpine aster, and woolly balsamroot.

The CNPS Inventory for the Weed quadrangle does not identify any additional special-status plant species in the quadrangle; however, four non-status plants are recorded in the quadrangle.

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

Special-Status Animal Species

Review of the USFWS species list for the project area identified the following federally listed animal species as potentially being affected by the proposed project: gray wolf, North American wolverine, northern spotted owl, yellow-billed cuckoo, Lost River sucker, shortnose sucker,

Franklin's bumble bee, monarch butterfly, conservancy fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp. The USFWS does not identify any designated critical habitat in the study area for any federally listed animal species.

Review of CNDDB records showed that no special-status animal species have been reported within the project boundary. Six special-status animal species have been recorded within a five-mile radius of the project site: bald eagle, Cascades frog, fisher, Lower Klamath marbled sculpin, Sierra Nevada red fox, and western yellow-billed cuckoo.

NMFS records identify one federally listed anadromous fish species in the Weed quadrangle: Southern Oregon/Northern Central California (SONCC) Coho evolutionarily significant unity (ESU). Additionally, NMFS identified critical habitat for SONCC Coho, and essential fish habitat (EFH) for Coho and Chinook salmon in the Weed quadrangle. The proposed project would include work in Boles Creek. According to the *Final Recovery Plan for the Southern Oregon/Northern California Coast Evolutionarily Significant Unit of Coho Salmon (Oncorhynchus kisutch)*, Boles Creek is tributary to the Shasta River, which discharges to Lake Shastina. Because the construction of Dwinnell Dam at Lake Shastina blocked access for anadromous salmonids, there is no potential for salmonids to be present in the project area.

The potential for each special-status animal species to occur on the project site is evaluated in **Appendix C**. As documented in Appendix C, no special-status animal species were observed during the wildlife survey, nor are any expected to be present. However, indirect effects to aquatic species and their habitats could potentially occur if sediments or other pollutants enter Boles Creek and degrade habitat in the study area and/or downstream. As discussed in Section 4.10, Hydrology and Water Quality, the City of Weed's construction standards require implementation of water pollution controls for projects with less than one acre of ground disturbance. 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. Implementation of the City's construction standards would ensure that potential indirect effects on aquatic species and their habitats are less than significant.

Birds of Conservation Concern

The project area is located within the Pacific Flyway, and it is possible that birds could nest in or adjacent to the study area. Riparian vegetation provides preferred nesting habitat for a number of bird species. 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.

In the local area, most birds nest between February 1 and August 31. As required by **MM 4.4.1**, 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, establishment of 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.

Sensitive Natural Communities

Sensitive natural communities present in the study area consist of Boles Creek and its adjoining riparian habitat. Potential effects on Boles Creek are addressed below under Question C (wetlands and other waters).

The riparian habitat is not a wetland as defined by the Corps of Engineers, but is subject to CDFW jurisdiction through a Streambed Alteration Agreement. Construction of the proposed project would require the removal of ~0.01 acre of riparian habitat along the banks of Boles Creek for riprap installation. In addition, ~0.04 acres of riparian habitat is present in the remainder of the study area and could be temporarily affected during project construction. Implementation of **MM 4.4.2** would help avoid/minimize the loss of riparian habitat and would promote quick regeneration of riparian plants following completion of construction.

Noxious Weeds

The introduction and spread of noxious weeds during construction activities has the potential to adversely affect sensitive habitats. 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 4.4.3,** the potential for introduction and spread of noxious weeds can be avoided/minimized by using only certified weed-free erosion control materials, mulch, and seed; limiting any import or export of fill material to material that is known to be weed free; and requiring the construction contractor to thoroughly wash all construction vehicles and equipment at a commercial wash facility before entering and upon leaving the job site. Implementation of **MM 4.4.3** reduces potential impacts related to the introduction and spread of noxious weeds to a less-than-significant level.

Question C

On March 22, 2022, ENPLAN conducted a field investigation of the project site to identify the presence and extent of wetlands and other waters of the U.S. and State. The field investigation was conducted in accordance with technical methods outlined in the *Corps of Engineers Wetlands Delineation Manual* (USACE, 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008), and the *Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (Lichvar, 2008).

As a result of the field delineation effort, one perennial stream, Boles Creek, was mapped in the study area; no wetlands are present in the study area. A map depicting the on-site waters is included in **Appendix D**. At the time of preparation, the study area boundary in the aquatic resources delineation map included the building to the northwest. The current study area boundary was revised to exclude this building; however, the delineation results are the same.

The USACE has reviewed the aquatic resources delineation map and commented that the extent of federal jurisdiction includes all waters of Boles Creek up to the ordinary high-water mark, including the section that has been channelized and diverted underground. The extent of State jurisdiction will be determined by Water Board staff, in accordance with the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, and is expected to be concurrent with USACE jurisdiction.

Project implementation would permanently affect ~0.006 acres of Boles Creek due to the placement of riprap at the inlet and outlet of the culvert as well as construction of the new headwall at the culvert inlet. Another ~0.043 acres of open channel are present in Boles Creek in the study area and could potentially be affected during construction activities. To minimize the potential for inadvertent disturbance of other portions of the stream and its riparian habitat, **MM 4.4.2** requires that prior to commencement of construction activities exclusionary fencing, flagging, or other markers shall be installed around the waters and riparian habitat that are planned for avoidance.

The proposed project is expected to qualify for a USACE Nationwide Permit. A project requiring a USACE permit is also required to obtain a State Water Quality Certification (or waiver) to ensure that the project will not violate established State water quality standards. A Lake and Streambed Alteration Agreement (LSAA) from CDFW would also be required. Compliance with the conditions of resource agency permits, use of BMPs for spill prevention and erosion control, and implementation of **MM 4.4.2**

would reduce the potential impacts of the project on waters of the U.S. and State to a less-than-significant level. Further, as discussed above under Section 4.1 (Aesthetics), in accordance with City policy and **MM 4.1.1**, trees removed to facilitate project construction would be replaced at a minimum 1:1 ratio upon completion of construction.

Question D

Wildlife movement patterns can be disrupted by barriers (e.g., dams, reservoirs, highways, altered stream flows, urban development, habitat conversion, etc.) that impede the movement of migratory fish, birds, deer, and other wildlife species. In addition, during construction, human activity in the project area may impede the movement of wildlife. The proposed project entails replacement of a concrete lined channel with a box culvert. No additional structures that could permanently impede the movement of any aquatic species would be constructed.

Boles Creek supports numerous wildlife species, including native and introduced fish, garter snakes, tree frogs, and aquatic insects. Streamside vegetation may provide nesting habitat for a variety of bird species, and small mammals such as raccoons could build dens in the streamside vegetation. In addition, riparian habitats serve as important dispersal corridors for amphibians, turtles, and some mammals.

CDFW does not identify any critical summer or winter ranges, fall holding areas, or fawning grounds for deer in the project area. Given the urban location of the proposed project and the temporary nature of project impacts, the project is not expected to have a significant effect on terrestrial wildlife movement. Because stream flow would remain constant throughout the construction period (except during a brief period when flow is redirected from the existing lined channel to the new box culvert), aquatic wildlife movement would not be adversely affected.

Potential effects of the proposed project on nesting birds are addressed above under Questions A and B, and **MM 4.4.1** would minimize the potential for disruption of nesting activities.

With implementation of **MM 4.4.1**, project implementation would have a less-than-significant potential to 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 to impede the use of native wildlife nursery sites.

Question E

As identified under Regulatory Context, the City of Weed General Plan includes goals, objectives, policies, and programs related to the conservation of natural resources. Implementation of **MM 4.4.1 through MM 4.4.3** and compliance with resource agency permits ensures consistency with local policies that protect biological resources. Therefore, impacts would be less than significant.

Question F

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

CUMULATIVE IMPACTS

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

The conversion of plant and wildlife habitat on a regional level as a result of cumulative development would potentially result in a regionally significant cumulative impact on special-status species and their habitats.

Implementation of **MM 4.4.1 through MM 4.4.3**, implementation of BMPs for erosion and sediment control, and compliance with resource agency permit conditions ensures that the project's contribution to cumulative regional impacts would be less than significant.

MITIGATION

MM 4.4.1 In order to avoid impacts to nesting birds and raptors protected under the federal Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5, including their nests and eggs, one of the following shall be implemented:

a. Vegetation removal and other ground-disturbance activities associated with construction shall occur between September 1 and January 31 when birds are not nesting; or

b. If vegetation removal or ground disturbance activities occur during the nesting season, a pre-construction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area.

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 survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

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

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

- Minimize the construction disturbance to riparian habitat along Boles Creek through careful pre-construction planning.
- Install high-visibility fencing, flagging, or other markers along the outer edges of the construction zone where needed to prevent accidental entry into riparian habitat and jurisdictional waters. The fencing location shall be determined by a qualified biologist in consultation with the project engineer and the City of Weed. No construction activities (e.g., clearing, grading, trenching, etc.), including vehicle parking and materials stockpiling, shall occur within the fenced area. The exclusionary fencing shall be periodically inspected during construction activities to ensure the fencing is properly maintained. The fencing shall be removed upon completion of work.
- Stockpile equipment and materials outside of riparian habitat, in the designated staging areas.
- Prune any riparian plants at ground level where feasible (as opposed to mechanically removing the entire plant and root system) in temporary use areas, which will promote regeneration from the root systems.

MM 4.4.3 The potential for introduction and spread of noxious weeds shall 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 equipment at a commercial wash facility prior to entering the job site and upon leaving the job site.

DOCUMENTATION

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4.5 CULTURAL RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☒	☐	☐
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, including artifacts, records, and material remains related to such a property (NHPA Sec. 301[5]). A resource is considered eligible for listing in the National Register of Historic Places (NRHP) if it meets criteria defined in CFR Title 36, §60.4. Section 106 applies to projects undertaken by federal agencies or funded by a federal agency.

STATE

California Environmental Quality Act (CEQA)

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

1. The resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR).
2. The resource is included in a local register of historic resources, as defined in §5020.1(k) of the 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:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

LOCAL

City of Weed

The City of Weed's General Plan includes the following Goals, Objectives, and Programs related to cultural resources that are applicable to the proposed project:

Community Development Resource		
Goal	CD 2	A community that celebrated the rich history of Weed
Objective	CD 2.1	Preserve and protect Weed's cultural, historic, and archaeological resources.
Program	CD 2.1.1.1	Identify and register significant cultural and historic resources with the National Register of Historic Place and/or the California Inventory of Historic Resources.

DISCUSSION OF IMPACTS

Questions A and B

A Cultural Resources Inventory (CRI) was completed for the proposed project by ENPLAN in September 2022. The study included a records search, Native American consultation, and field evaluation. The records search included review of records at the Northeast Information Center of the California Historical Resources Information System at California State University, Chico (NEIC/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); the directory of properties in the Historic Property Data Files for Siskiyou County; 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 and is approximately 0.62 acres in size. The vertical APE (i.e., associated with the potential for buried cultural resources) is based on the engineering design of the project and reflects the planned depths of the excavations associated with the project. The vertical APE is a maximum depth of six feet along the box culvert and a maximum depth of 14 feet for the sewer main replacement.

Records Search

Research at the NEIC was conducted on June 23, 2022, and covered an approximate quarter-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 11 cultural resources surveys have been conducted within a quarter-mile radius around the APE, one of which was completed within the APE.

One cultural resource site has been previously recorded in the search radius; however, the site is not within the project 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 June 17, 2022, the NAHC responded by email that they received ENPLAN's request and the results from a search of its Sacred Lands File would be delayed. Therefore, contact with Native American representatives and organizations was made based on a list of contacts sent by NAHC for another project within the vicinity. On June 26, 2022, ENPLAN contacted the Native American representatives previously identified by the NAHC with a request to

provide comments on the proposed project. Follow-up correspondence in the form of telephone calls and emails was conducted on August 10, 2022, to these representatives.

Responses were received from Alex Watts-Tobin of the Karuk Tribe and Mark Miyoshi of the Winnemem Wintu. Alex Watts-Tobin did not have any information to share on the project. Mark Miyoshi stated that the project is not within the traditional Winnemem Wintu Tribal territory. No other comments or concerns were reported by any Native American representative or organization. On October 11, 2022, the NAHC confirmed that a search f its Sacred Land File provided negative results.

Field Survey

Archaeological fieldwork took place on June 21, 2022. No cultural resources were observed in the APE.

Conclusions

The cultural resources field survey found no evidence of significant historical or archeological resources within the APE. However, the soil type present in the project area, Odas sandy loam, dates to late Holocene (4,000-2,000 years B.P.) and thus has a moderate to high potential to contain subsurface cultural resources due to its relatively young age. Given extensive subsurface disturbances in the area, such as construction of adjacent buildings and the existing lined concrete channel, the potential for intact buried cultural resources is low.

Although no historic or prehistoric resources were observed, there is always some potential that such resources could be encountered during soil excavation. **Mitigation Measure 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 would be less than significant.

CUMULATIVE IMPACTS

Cumulative projects in the vicinity of the study area have the potential to adversely affect cultural resources. Cumulative projects and the proposed project are subject to the requirements of CEQA Guidelines §15064.5 and related provisions of the PRC that are designed to protect cultural resources. In addition, projects with federal involvement are subject to Section 106 of the NHPA, which provides additional protections for cultural resources.

Given the non-renewable nature of cultural resources, any impact to protected sites could be considered cumulatively considerable. As discussed above, **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 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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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

FEDERAL

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

STATE

Renewables Portfolio Standard (RPS)

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. The RPS has been subsequently amended since its adoption, most recently by SB 100 (2018), which codified targets of 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045. In addition, SB 350 (2015) requires California utilities 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 off-road heavy-duty diesel vehicles in California. The regulation covers a wide range of vehicle types, including, but not limited to, vehicles used in construction, mining, industrial operations, and other industries. The Regulation requires that fleets meet an increasingly stringent set of fleet average targets, culminating in 2023 for large and medium fleets, and in 2028 for small fleets. The most stringent fleet average target generally corresponds to a 2012 model year, or a Tier 3 average standard (CARB, 2022c).

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

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

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

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.

LOCAL

City of Weed

Although the City of Weed General Plan contains various Goals, Objectives, Policies, and Programs related to energy, none are applicable to the proposed project.

DISCUSSION OF IMPACTS

Questions A and B

The project does not include any components that would result in a permanent increase in energy use. Energy consumption during construction would include use of diesel and gasoline for construction equipment, haul trucks, and construction workers traveling to and from the work site. Construction

equipment must comply with State regulations that require the use of fuel-efficient equipment. Therefore, impacts would be less than significant.

CUMULATIVE IMPACTS

Completion of the proposed project and other projects in the region, including growth resulting from build-out of the City of Weed General Plan, could result in potentially significant impacts due to the wasteful, inefficient, or unnecessary consumption of energy resources. However, all new development projects in the State are required to comply with State regulations that require the use of fuel-efficient equipment during construction. Therefore, cumulative impacts on energy resources would be less than significant.

MITIGATION

None necessary

DOCUMENTATION

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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 (NEHR)

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

STATE

California Alquist-Priolo Earthquake Fault Zoning Act

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

California Seismic Hazards Mapping Act (SHMA)

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

California Building Standards Code

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

LOCAL

City of Weed

The City's General Plan includes the following Goals, Objectives, Policies, and Programs related to geology and soils that are applicable to the proposed project:

Safety Element		
Goals	SF 2	A risk aware community prepared for natural disaster and emergencies.
	SF 3	A community protected from natural and manmade hazards.
Objectives	SF 3.1	Protect residents and property located within the city limits from naturally or human caused hazards.
Policies	SF 3.1.1	Continue to enforce the California Building Code (CBC) for all new construction and renovation and when occupancy or use changes occur.
	SF 3.2.3	Enforce measures to minimize soil erosion and volume and velocity of surface runoff both during and after construction through application of the erosion control guidelines.
Programs	SF 3.2.3.2	Require that best practices for erosion during construction be followed for all construction projects.
	SF 3.4.2.1	Require a geotechnical report for development where landslides, steep slopes, and soil conditions are a potential hazard.

DISCUSSION OF IMPACTS

Question A
i and ii)

According to the Alquist-Priolo Earthquake Fault Zone Map, there are no Alquist-Priolo Special Study Zones in the project area. The nearest Alquist-Priolo Special Study Zone is the Cedar Mountain Fault Zone, approximately 25 miles to the east. According to the California Department of Conservation (DOC), two potentially active unnamed faults are located east of the project area. One is a north-south trending fault running through the top of Mount Shasta; the other is an east-west trending fault that runs from the top of Mount Shasta to a point north of Black Butte.

Although these fault lines could produce low to moderate ground shaking, earthquake activity has not been a serious hazard in the area, and no significant damage or loss of life due to earthquakes has occurred in or near the County. Further, the project does not include any components that would increase the likelihood of a seismic event or increase the exposure of people to risks

associated with a seismic event; therefore, impacts related to seismic ground shaking are less than significant.

iii)

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

According to the Natural Resources Conservation Service (NRCS) Soil Survey, the soil type on the site is Odas sandy loam. The parent material of Odas sandy loam is alluvium derived from igneous rock. Although the new box culvert would be constructed in alluvial stream deposits that may be subject to liquefaction, improvement plans for the proposed project would be prepared by a registered professional engineer to ensure that design and/or construction methods are implemented to reduce or eliminate potential impacts. With implementation of standard engineering design measures, the potential for liquefaction is less than significant.

iv)

The project site is relatively flat with the exception of the Boles Creek embankments. The proposed project includes the addition of riprap to the embankments at the inlet and outlet of the box culvert, and the construction of a new concrete headwall and approach at the inlet. Although construction of these improvements may require minor earthwork, the proposed project does not include extensive disturbance of steep slopes; therefore, potential impacts associates with landslides are less than significant.

Question B

Construction of the proposed project would involve minor excavation and vegetation removal, which would result in the temporary disturbance of soil and would expose disturbed areas to potential storm events. This could generate accelerated runoff, localized erosion, and sedimentation. In addition, construction activities could expose soil to wind erosion that could adversely affect on-site soils and the revegetation potential of the area. According to the 1983 Soil Survey for Siskiyou County, Odas sandy loam has a slight potential for erosion.

As discussed in Section 4.10 (Hydrology and Water Quality), the City of Weed has adopted the City of Redding's construction standards which include water pollution control requirements for projects with less than one acre of ground disturbance. The project is required to implement BMPs in accordance with the water pollution control requirements to control construction-related erosion and runoff. Measures that may be implemented to minimize erosion include, but are not limited to, limiting construction to the dry season; use of straw wattles, silt fences, and/or gravel berms to prevent sediment from discharging off-site; and revegetating temporarily disturbed sites upon completion of construction. Because BMPs for erosion and sediment control would be implemented in accordance with existing requirements, the potential for soil erosion and loss of top soil would be less than significant.

Questions C and D

See discussion under Question A (iii) and (iv) and Question B above. Unstable soils consist of loose or soft deposits of sands, silts, and clays. Some soils have a potential to swell when they absorb water and shrink when they dry out. These expansive soils generally contain clays that expand when moisture is absorbed into the crystal structure. According to the NRCS Soil Survey, Odas sandy loam has a low shrink-swell potential. In addition, improvement plans for the proposed project would be prepared by a registered professional engineer to ensure that appropriate design and/or construction methods are implemented to minimize or avoid potential impacts. Therefore, impacts would be less than significant.

Question E

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

Question F

Paleontological resources include fossils and the deposits that contain fossils. Fossils are evidence of ancient life preserved in sediments and rock, such as the remains of animals, animal tracks, plants, and other organisms. According to the California Geological Survey, rock formations on the project site are Tertiary-age volcanic flow rocks with minor pyroclastic deposits (mostly flows, breccia, and tuff, including greenstone, diabase, and pillow lavas). Because volcanic rocks were generated from volcanic eruptions and were formed under high temperature and pressure conditions, the project site has an extremely low potential to harbor fossils. In addition, the project area has no unique geological features, and according to the U.C. Berkeley Museum of Paleontology, no fossils have been reported in the project area. Therefore, there would be no impact.

CUMULATIVE IMPACTS

Completion of the proposed project and other potential cumulative projects in the region, including growth resulting from build-out of the City of Weed General Plan, could result in increased erosion and soil hazards and could expose additional structures and people to seismic hazards. However, as discussed above, the project is required to implement BMPs to control construction-related erosion. In addition, pursuant to existing State regulations, incorporation of standard seismic safety and engineering design measures is required for all public utility projects. Therefore, the proposed project's cumulative impacts are less than significant.

MITIGATION

None necessary.

DOCUMENTATION

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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

FEDERAL

U.S. Environmental Protection Agency

In *Massachusetts v. EPA,* 549 U.S. 497 (2007), the Supreme Court found that GHGs are air pollutants covered by the federal CAA. The Court also acknowledged that climate change is caused, in part, by human activities. The Supreme Court's ruling paved the way for the regulation of GHG emissions by the U.S. Environmental Protection Agency (USEPA) under the CAA. The USEPA has enacted regulations that address GHG emissions, including, but not limited to, mandatory GHG reporting requirements, carbon pollution standards for power plants, and emission standards for oil and natural gas consumption.

STATE

California Executive Order (EO) S-3-05

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

Assembly Bill 32 (Global Warming Solutions Act of 2006)

As required by AB 32 (2006), CARB adopted the initial Climate Change Scoping Plan in 2008 that identified the State's strategy to achieve the 2020 GHG emissions limit via regulations, market-based mechanisms, and other actions. AB 32 requires that the Scoping Plan be updated every five years. CARB's first update to the Climate Change Scoping Plan (2014) addressed post-2020 goals and identified the need for a 2030 mid-term target to establish a continuum of actions to maintain and continue reductions. Executive Order B-30-15 (2015) extended the goal of AB 32 and set a GHG reduction goal of 40 percent below 1990 levels by 2030. In December 2017, CARB adopted the second update to the Scoping Plan that includes strategies to achieve the 2030 mid-term target and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

The 2017 Scoping Plan Update recommends that local governments aim to achieve a community-wide goal of no more than 6 MT CO_2e per capita by 2030 and no more than 2 MT CO_2e per capita by 2050, which is consistent with the State's long-term goals.

California Executive Order B-55-18

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

2022 Scoping Plan for Achieving Carbon Neutrality

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

Senate Bill 32/Assembly Bill 197

These two bills were signed into legislation on September 8, 2016. As set forth in EO B-30-15, SB 32 requires CARB to reduce GHG emissions to 40 percent below the 1990 levels by 2030. AB 197 requires that GHG emissions reductions be achieved in a manner that benefits the state's most disadvantaged communities. AB 197 requires CARB to prioritize direct GHG emission reductions in a manner that benefits the state's most disadvantaged communities and to consider social costs when adopting regulations to reduce GHG emissions. AB 197 also provides more legislative oversight of CARB by adding two new legislatively appointed non-voting members to the CARB Board and limiting the term length of Board members to six years.

Renewables Portfolio Standard (RPS)

In 2002, SB 1078 was passed to establish the State's RPS Program, with the goal of increasing the amount of electricity generated and sold to retail customers from eligible renewable energy resources. The initial goal was to increase the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. SB 350 (2015) codified a target of 50 percent renewable energy by 2030, and requires California utilities to develop integrated resource plans that incorporate a GHG emission reduction planning component beginning January 1, 2019. SB100 (2018) codified targets of 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045.

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. The Strategy demonstrates how the State can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risks from transportation emissions, and reduce petroleum consumption over the next fifteen years.

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

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

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

SB 44 requires CARB to establish emission reduction goals for 2030 and 2050 for medium- and heavy-duty vehicles.

CEQA Guidelines

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

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

If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an Environmental Impact Report (EIR) must be prepared for the project. To determine transportation-generated greenhouse gas emissions in particular, lead agencies may determine that it is appropriate to use the same method used to determine the transportation impacts associated with a project's vehicle miles 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 at p. 229.)

Greenhouse Gases Defined

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

TABLE 4.8-1
Greenhouse Gases

Greenhouse Gas	Description
Carbon dioxide (CO_2)	Carbon dioxide (CO_2) is the primary greenhouse gas emitted through human activities. In 2014, CO_2 accounted for about 80.9 percent of all U.S. greenhouse gas emissions from human activities. The main human activity that emits CO_2 is the combustion of fossil fuels (coal, natural gas, and oil) for energy and transportation, although certain industrial processes and land-use changes also emit CO_2.
Methane (CH_4)	Methane (CH_4) is the second most prevalent greenhouse gas emitted in the United States from human activities. Methane is emitted by natural sources such as wetlands, as well as human activities such as the raising of livestock; the production, refinement, transportation, and storage of natural gas; methane in landfills as waste decomposes; and in the treatment of wastewater.

Greenhouse Gas	Description
Nitrous oxide (N_2O)	In 2014, nitrous oxide (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)	Hydrofluorocarbons (HFCs) are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products such as refrigerants, aerosol propellants, solvents, and fire retardants. They are released into the atmosphere through leaks, servicing, and disposal of equipment in which they are used.
Perfluorocarbons (PFCs)	Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_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)	Sulfur hexafluoride (SF_6) is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used in magnesium processing and as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF_6 produced worldwide.
Nitrogen trifluoride (NF_3)	Nitrogen trifluoride is a colorless, odorless, nonflammable gas that is highly toxic by inhalation. It is one of several gases used in the manufacture of liquid crystal flat-panel displays, thin-film photovoltaic cells and microcircuits.

LOCAL

Although the City of Weed General Plan contains a number of Goals, Objectives, Policies, and Programs related to GHGs, none are applicable to the proposed project.

DISCUSSION OF IMPACTS

Question A

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

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

Gases with a higher GWP absorb more heat than gases with a lower GWP, and thus have a greater effect on global warming and climate change. The GWP metric is used to convert all GHGs into CO_2 equivalent (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	50 -200

CH_4	25	12
N_2O	298	114
HFCs	Up to 14,800	Up to 270
PFCs:	7,390-12,200	2,600 – 50,000
SF_6	22,800	3,200
NF_3	17,200	740

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

Thresholds of Significance

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

For a quantitative analysis, a lead agency could determine that an impact is less than significant if emission levels do not exceed an established numerical threshold. Pursuant to §15064.4(b)(2) of the CEQA Guidelines, lead agencies may use thresholds on a case-by-case basis. Further, CEQA Guidelines §15064.7(c) allows lead agencies to look to thresholds previously adopted or recommended by other public agencies or recommended by experts.

For a qualitative/performance-based threshold, a lead agency could determine that an impact is less than significant 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, a project's construction and operational GHG emissions should still be quantified with respect to 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 need for vehicle travel (OPR, 2018).

Neither the City of Weed nor SCAPCD have adopted numerical thresholds of significance 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).

The proposed project does not include any components that would result in a permanent increase in GHG emissions above existing levels, either directly or indirectly; therefore, only GHGs associated with construction activities were considered. For this project, the City has determined that a conservative threshold of 900 MT/year CO_2e for construction emissions is appropriate.

Project GHG Emissions

GHG emissions for the proposed project were estimated using the CalEEMod.2020.4.0 software. CalEEMod is a statewide model designed to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. As noted above, the project does not include any components that would result in an increase in operational emissions over existing levels, and only construction-related GHG emissions were considered.

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

- Emissions from construction are based on all construction-related activities associated with proposed and future uses, including but not limited to grading, use of construction equipment, material hauling, trenching, and site preparation.
- Demolition activities would generate approximately 110 tons of solid waste, mainly pavement that is removed to accommodate the proposed improvements.
- 300 CY of dirt would be imported and 400 CY of dirt would be exported.
- Construction would commence in 2023 and would be completed in approximately 12 months.

Construction of the proposed project would emit GHG emissions as shown in **Table 4.8-3**, primarily from the combustion of diesel fuel in heavy equipment. As indicated in the table, CO_2e associated with construction of the proposed project would not exceed the referenced numerical threshold of 900 MT/year of CO_2e. Therefore, potential impacts associated with GHG emissions would be less than significant.

TABLE 4.8-3
Construction-Related Greenhouse Gas Emissions

Total Construction Emissions (Metric Tons)				
Year	**Carbon Dioxide (CO_2)**	**Methane (CH_4)**	**Nitrous Oxide (N_2O)**	**Carbon Dioxide Equivalent (CO_2e)**
2023	106.10	0.03	0	106.16

Question B

See discussion 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 project would not conflict with a plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

CUMULATIVE IMPACTS

GHG emissions and global climate change are, by nature, cumulative impacts. Unlike criteria pollutants, which are pollutants of regional and local concern, GHGs are global pollutants and are not limited to the area in which they are generated. As discussed under Regulatory Context above, the State legislature has adopted numerous programs and regulations to reduce statewide GHG emissions. As documented above, construction-related GHG emissions would not exceed the referenced numerical threshold of 900 MT/year CO_2e, and there would be no increase in VMT, energy use, or GHG emissions as a result of project operation. Therefore, the proposed project's contribution to cumulative GHG emissions would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

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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 USEPA has primary responsibility for implementing the RCRA.

USEPA's Risk Management Plan

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

Federal Occupational Safety and Health Administration (OSHA)

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

U.S. Department of Transportation

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

STATE

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

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, State, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22, §66260.10, of the CCR as: *"A substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed."*

Department of Toxic Substances Control

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

California Occupational Safety and Health Administration (Cal/OSHA)

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

Regional Water Quality Control Board

The SWRCB and RWQCBs regulate hazardous substances, materials, and wastes through a variety of state statutes, including the Porter-Cologne Water Quality Control Act and underground storage tank

cleanup laws. The Regional Boards regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. Any person proposing to discharge waste within the State must file a report of waste discharge with the appropriate regional board. The proposed project is located within the jurisdiction of the CVRWQCB.

Hazardous Materials Emergency Response/Contingency Plan

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

California Accidental Release Prevention Program (CalARP)

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

California Public Resources Code (Wildland Fires)

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

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

LOCAL

City of Weed

The City of Weed General Plan includes the following Goals, Objectives, Policies, and Programs related to hazards and hazardous materials that are applicable to the proposed project:

Safety Element		
Goals	SF 1	A safe community.
	SF 2	A risk aware community prepared for natural disaster and emergencies.
	SF 4	Safe and clean air, soil, and water.
Objectives	SF 1.4	Increase awareness of fire risk.
	SF 2.1	Improve community-wide awareness and preparedness of potential natural and human caused emergencies.

Policies	SF 4.1.1	All Certified Unified Program Agencies (CUPA) designated hazardous waste and spill sites should be cleaned to meet state standards.
Programs	SF 2.1.1.5	Increase community awareness by delineating areas at high risk of contamination, landslides, hazardous waste sites, and high fire risk zones.

DISCUSSION OF IMPACTS

Questions A and B

The project would not result in any long-term impacts related to the transport of hazardous materials. During construction, limited quantities of hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc., may temporarily be brought into areas where improvements are proposed. There is a possibility of accidental release of hazardous substances into the environment, such as spilling petroleum-based fuels used for construction equipment. Construction contractors would be required to comply with applicable federal and state environmental and workplace safety laws. Additionally, construction contractors are required to implement BMPs for the storage, use, and transportation of hazardous materials. Therefore, impacts would be less than significant.

Question C

The Weed Union Elementary School on S. Davis Avenue is located approximately 0.35 miles north of the project site and the College of the Siskiyous on College Avenue is located 0.55 miles south of the project site.

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

Question D

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

- List of Hazardous Waste and Substances sites from the Department of Toxic Substances Control (DTSC) EnviroStor Database.
- SWRCB GeoTracker Database
- List of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit.
- List of active Cease and Desist Orders and Clean-Up and Abatement Orders from the SWRCB.
- Review of a Phase I Environmental Site Assessment Report prepared for the project site by KC Engineering Company (2022).

Review of the above records identified three active clean-up sites within a half-mile radius of the project site, as discussed below. In addition, potential hydrocarbon contamination was encountered in a soil boring installed in the northwestern portion of the site in March 2022.

Chevron Service Station 9-3476

This clean-up site is located at the southeast corner of the intersection of US 97 and Main Street, approximately 210 feet south of the project site. A Ford car dealership formerly operated on the site until Chevron acquired the property at an unknown time. A Chevron-branded retail facility currently operates on site. According to a Summary Report published by the SWRCB in 2018, an unauthorized release was reported following the removal of three gasoline Underground Storage Tanks (USTs) in 1985. Free product was noted during UST removal and was characterized predominately as gasoline with a minor diesel component. Between 1986 and 1988, approximately 145 gallons of free product

were removed from the clean-up site. A groundwater extraction system operated between 1987 and 1997, removing approximately 3,287,000 gallons of groundwater along with 350 pounds of dissolved-phase hydrocarbons and 140 gallons of free product. A waste oil tank and heating oil tank were removed in 1991. Soil removal and soil vapor extraction were conducted in 1991. Between 1992 and 2016, soil and groundwater remediation were conducted, and the collected data revealed a steep decline in contamination levels. Recent groundwater data indicates that water quality objectives have been achieved or nearly achieved. A Notice of Proposed No Further Action was circulated by Siskiyou County in 2021, stating that the site investigation determined that the extent of contamination is limited and the residual levels of petroleum contamination are anticipated to naturally attenuate to water quality objectives in a reasonable amount of time, while not impacting human health or the environment. Therefore, the project would not impact or be impacted by the Chevron clean-up site.

Texaco

This clean-up site is located on the southwest side of US 97, approximately 535 feet southeast of the project site. According to a Feasibility Study and Pilot Test Work Plan published by GHD in 2018, a Texaco service station formerly operated on the site until an unknown date; the site then operated as a laundromat until 2013. The existing onsite building is currently occupied by a retail store. An unauthorized release was reported in 1988 following the removal of five USTs. An unspecified volume of soil was excavated for offsite disposal in March 1988; absorbent socks and hand bailing were installed and operated from 2009 through 2017; and surface injection and multiphase extraction was completed in 2020. Since 2008, seven groundwater monitoring wells have been installed and regularly monitored. As stated in the 2021 Summary Report published by the SWRCB, water quality objectives have not been achieved. However, the petroleum release is limited to the soil and shallow groundwater; and, the contaminant plume is less than 100 feet in length. Due to the distance between the project site and the clean-up site, the project would not impact or be impacted by the clean-up site.

Morgan Products

This clean-up site is located on the Roseburg property, approximately 0.45 miles north of the proposed project. The Morgan Products site was used for wood processing and treatment operations beginning in the early 1900s. Operations included the use of pentachlorophenol (PCP) to preserve wood products, which ultimately resulted in soil, groundwater, and surface water contamination. Site investigations and monitoring of groundwater and surface water at the site have been ongoing since 1989.

According to the 2020 Annual Groundwater and Surface Water Monitoring Summary Report for the clean-up site (International Paper and AECOM, 2020), nine monitoring wells are located on the property. There are also four off-site groundwater wells south of the project site in public road rights-of-way.

The report states that PCP contamination is confined to a plume that extends from the former spray booth and dip tank area, ±400 feet north of Park Way, to an onsite monitoring well ~100 feet north of Park Way. PCP concentrations decrease laterally from the center of the plume and toward the southern property boundary. PCP was not detected in any of the offsite monitoring wells during 2020. Due to the distance between the project site and the clean-up site, the project would not impact or be impacted by the clean-up site.

Potential On-Site Hydrocarbon Contamination

During a geotechnical investigation conducted by KC Engineering Company in March 2022, soils with a noticeable hydrocarbon odor and oily appearance were encountered approximately 7 feet below the ground surface (bgs) in a soil boring placed on the northwestern portion of the property. A black oily substance was observed floating in the groundwater, which was encountered approximately 7.2 feet bgs. Historical research indicates that this portion of the property was used as a parking area for logging trucks, and as a storage area for large strips of rubber used to re-cap logging truck tires. A heating oil AST is located to the south of this area at a nearby residence. Waste oil ASTs were previously located in the commercial building immediately southwest of the property at 83 Main Street. No other obvious potential sources for the potentially contaminated soil and groundwater were identified during the Phase I Environmental Site Assessment. Because the type and extent of contamination (if any) has not yet been identified, the potential for a significant hazard to exist cannot

be ruled out. **Mitigation Measures MM 4.9.1 and 4.9.2** outline actions to be taken before and during project construction to ensure that construction personnel, the public, and the environment are not exposed to undue risks associated with contamination.

Question E

According to the Federal Aviation Administration, the nearest airport to the project site is the Weed Airport, approximately five miles northwest of the project site. Accordingly, the proposed project would not result in airport-related safety hazards or excessive noise levels.

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.

In addition, pursuant to Cal/OSHA requirements, temporary traffic control during completion of activities that require work in the public right-of-way (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). Compliance with MUTCD requirements would ensure that the proposed project would not interfere with emergency response vehicles or an emergency evacuation plan; therefore, impacts during construction would be less than significant.

Question G

The proposed project does not include any development or improvements that would increase the long-term risk of wildland fires or expose people or structures to wildland fires. However, equipment used during construction activities may create sparks that could ignite dry vegetation or wood. In accordance with Cal/OSHA regulations (Division 1, Chapter 4, Subchapter 4, Article 36 (Fire Protection and Prevention), a fire protection program must be followed throughout all phases of construction. Implementation of the fire protection program ensures that impacts would be less than significant.

CUMULATIVE IMPACTS

With implementation of the proposed mitigation measures, the proposed project does not include any components that would result in long-term risks associated with hazards or hazardous materials. The handling, storage, use, and disposal of hazardous materials during construction must be conducted in accordance with State and local regulations, and steps must be taken during construction to reduce potential impacts associated with wildland fires. These regulations ensure that impacts are less than significant and that activities do not result in impacts that would be cumulatively considerable.

MITIGATION

MM 4.9.1 Prior to construction, soil and groundwater samples shall be collected from areas planned for excavation. The samples shall be analyzed to identify potentially hazardous materials. If contaminants are present at levels that exceed regulatory agency thresholds, a management plan shall be prepared to identify how soil and groundwater encountered during excavation will be handled and disposed, and shall be implemented during the project construction phase. All such work shall be conducted by a qualified professional in consultation with North Coast Regional Water Quality Control Board and/or Siskiyou County Environmental Health Division staff.

MM 4.9.2 If, during construction, any signs of hazardous materials or soil contamination (e.g., stained, discolored, or odorous soil) are uncovered, discovered, or otherwise detected or observed, construction activities in the affected area shall cease, and the City shall be immediately contacted.

The City, in consultation with North Coast Regional Water Quality Control Board and/or Siskiyou County Environmental Health Division staff, shall advise the contractor of the appropriate measures for containment, testing, and removal of the suspect material, in accordance with federal, State and local laws and regulations. Construction work in the affected area shall not resume until the City has determined that all required corrective measures have been satisfied.

DOCUMENTATION

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

California Environmental Protection Agency. 2022. Cortese List Data Resources. https://calepa.ca.gov/sitecleanup/corteselist/. Accessed January 2022.

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Siskiyou County. 2021. Notice of Proposed No Further Action for Chevron 9-3476. Notice of Proposed No Further Action Chevron #9-3476 Weed (ca.gov). Accessed January 2022.

Siskiyou County Office of Education. 2022. Siskiyou County Schools. https://www.siskiyoucoe.net/schools. Accessed January 2022.

State Water Resources Control Board. 2021. Texaco Summary Report – January 2021. 19680 2nd RSR Addl Work Jan 2021.pdf (ca.gov). Accessed January 2022.

4.10 HYDROLOGY AND WATER QUALITY

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
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:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines.
- 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.
- 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 SWRCB and is discussed in detail below.
- Section 404, jointly administered by the USACE and USEPA, establishes a permit program for the discharge of dredged or fill material into waters of the U.S.

Federal Anti-Degradation Policy

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

Safe Drinking Water Act

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

Federal Emergency Management Agency (FEMA)

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

National Pollutant Discharge Elimination System

Under Section 402(p) of the CWA, the USEPA established the NPDES to enforce discharge standards for both point-source and non-point-source pollution. Dischargers can apply for individual discharge permits, or apply for coverage under the General Permits that cover certain qualified dischargers. Point-source

discharges include municipal and industrial wastewater, stormwater runoff, combined sewer overflows, sanitary sewer overflows, and municipal separate storm sewer systems. NPDES permits impose limits on discharges based on minimum performance standards or the quality of the receiving water, whichever type is more stringent in a given situation.

STATE

Porter-Cologne Water Quality Control Act

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

State Anti-Degradation Policy

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

National Pollution Discharge Elimination System

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

Construction Activity and Post-Construction Requirements

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

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 the North Coast Regional Water Quality Control Board (NCRWQCB) Order R1-2015-0003 (NPDES No. CAG0024902), Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region, as amended. WDRs for this order include discharge prohibitions, receiving water limitations, monitoring, and reporting, etc. Coverage is obtained by submitting a NOI to the applicable RWQCB.

Dewatering Activities (Discharges to Land)

Construction dewatering activities that are contained on land and do not discharge to waters of the U.S. are authorized under SWRCB Water Quality Order No. 2003-003-DWQ if the discharge is of a quality as good as or better than the underlying groundwater, and there is a low risk of nuisance.

Water Quality Control Plans (Basin Plans)

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

Sustainable Groundwater Management Act

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

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

LOCAL

City of Weed General Plan

The City's General Plan includes the following Goals, Policies, and Programs related to hydrology and water quality that are applicable to the proposed project:

Conservation Element		
Goal	CO 2.1.1.2	Quickly and effectively clean hazardous material spills and ensure that water sources are unaffected.
Safety Element		
Goal	SF 3.2	Minimize the risk of personal injury and property damage due to flooding.
Policies	SF 3.2.3	Enforce measures to minimize soil erosion and volume and velocity of surface runoff both during and after construction through application of the erosion control guidelines.
Programs	SF 3.2.3.2	Require that best practices for erosion during construction be followed for all construction projects.
Public Facilities Element		
Goal	PF 2.1	Protect the community from risks associated with flooding.
Policies	PF 2.1.1	The City shall promote the orderly and efficient expansion of the storm drainage system to meet existing and projected needs.

City of Weed Standard Construction Measures

The City of Weed has adopted the City of Redding construction standards, which include water pollution control requirements for projects with less than one acre of ground disturbance. The water pollution control requirements include the development of a Water Pollution Control Plan (WPCP) prior to any construction activity. The WPCP must include BMPs for storm water and non-storm water discharges associated with construction activities. BMPs may include, but are not limited to, limiting construction to the dry season; pruning plants at ground level rather than removing the root ball (where appropriate); use of straw wattles, silt fences, and/or gravel berms to prevent sediment from discharging to surface waters; and installation of a spill containment system to prevent grease, oil, and other hazardous substances from discharging off-site.

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, the City of Weed has adopted the City of Redding construction standards which include water pollution control requirements for projects with less than one acre of ground disturbance. BMPs must be implemented for the proposed project to control construction-related erosion and runoff. Implementation of BMPs will avoid/minimize damage to Boles Creek and downstream aquatic habitats.

Likewise, if dewatering is proposed, work must comply with NCRWQCB General Order R1-2015-0003 or 2003-003-DWQ. The City of Weed must also obtain a Section 401 Water Quality Certification (or waiver) from the NCRWQCB to ensure that the project will not violate established State water quality standards.

In accordance with conditions of the NCRWQCB Section 401 permit, continuous visual surface water monitoring must be conducted during active construction periods to detect accidental discharge of construction-related pollutants (e.g., oil and grease, turbidity plume, uncured concrete, etc.). In addition, surface water sampling may be required when performing in-water work, and/or if construction activities result in materials reaching surface waters or if activities create a visible plume in surface waters. If the impact thresholds of the permit are exceeded, the City must immediately implement corrective actions to ensure compliance. Corrective actions may include additional soil stabilization and/or sediment control measures. Impacts would be less than significant.

Question B

The proposed project would not use groundwater for construction or operation. The proposed project includes replacing and upsizing the existing concrete channel with a new 8-foot by 5-foot concrete box culvert in the same location. A new concrete headwall, approach, and rip-rap side walls would be installed to transition the natural stream channel into the box culvert. Existing water and sewer utilities as well as concrete retaining walls and road surface will be removed and replaced within Rippon Way to accommodate installation of the headwall and box culvert. These improvements would not increase the amount of impervious surface in the area in a manner that would prevent the infiltration of water into the soil. Thus, the project would not impede sustainable groundwater management of the basin. There would be no impact.

Question C

i, ii, and iii)

The proposed project includes the replacing the existing undersized concrete channel with a new concrete box culvert. The new box culvert would be installed on the north side of the existing channel in order to keep water flowing during construction and minimize impacts to existing buildings adjacent to the existing storm drain. The existing channel would be backfilled and capped with concrete and paved areas that are disturbed during construction would be re-paved following installation of these improvements. However, as stated under Question B, improvements would not increase the amount of impervious surfacing in a manner that would increase the rate or amount of surface runoff or otherwise affect drainage patterns in the area. In addition, as discussed under Question A, BMPS would be implemented throughout construction to minimize erosion and runoff in accordance with existing regulations; therefore, impacts would be less than significant.

iv)

According to the FEMA Flood Insurance Rate Maps, flood zones within the City of Weed predominantly occur along Boles Creek. As stated in the 2007 Drainage Study prepared for the City of Weed by PACE Engineering, Inc., most of the flooding along Boles Creek has occurred in the section between Grove Street and the channel approximately 200 feet upstream of Main Street. In addition, any future development in the South Weed area would increase runoff into Boles Creek, subsequently exacerbating the existing flooding problems downtown. Although the proposed project would install a new, upsized box culvert on the north side of the existing concrete channel, the purpose of the project is to be able to carry the 100-year flood flows from Boles Creek in order to prevent flooding and ensure

the health and safety of residents living and working in downtown Weed. Therefore, impacts would be less than significant.

Question D

A tsunami is a wave generated in a large body of water (typically the ocean) by fault displacement or major ground movement. The project area is located approximately 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 Shastina, approximately 5.5 miles to the north. Seiches could potentially be generated in Lake Shastina due to very strong ground-shaking; however, due to the distance from the project site, the project site has no potential for inundation by seiche.

According to the FEMA Flood Insurance Rate Maps (Panel 06093C2567D, effective January 19, 2011), work would occur in the 100-year flood hazard zone of Boles Creek (see **Figure 4.10-1**). However, the purpose of the proposed project is to decrease flooding within downtown Weed and there would be no impact.

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 Department of Water Resources as medium or high priority basins. The project site is not located in a medium or high priority basin, and there is not a sustainable groundwater management plan that applies to the proposed project. Implementation of BMPs and compliance with NCRWQCB requirements ensures that the project would not violate any water quality standards or waste discharge requirements or conflict with or obstruct implementation of a water quality control plan. Impacts would be less than significant.

CUMULATIVE IMPACTS

The proposed project and other potential cumulative projects in the region, including growth resulting from build-out of the City of Weed General Plan, could result in degradation of water quality, adverse impacts to groundwater supplies and groundwater recharge, and an increased risk of flooding due to additional surface runoff generated by the projects. However, the project is required to implement BMPs for erosion/sediment control and spill prevention in accordance with standard construction measures and conditions of the regulatory agency permits. Compliance with existing resource agency requirements ensures that the proposed project's cumulative impacts to hydrology and water quality are less than significant.

MITIGATION

None necessary.

DOCUMENTATION

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

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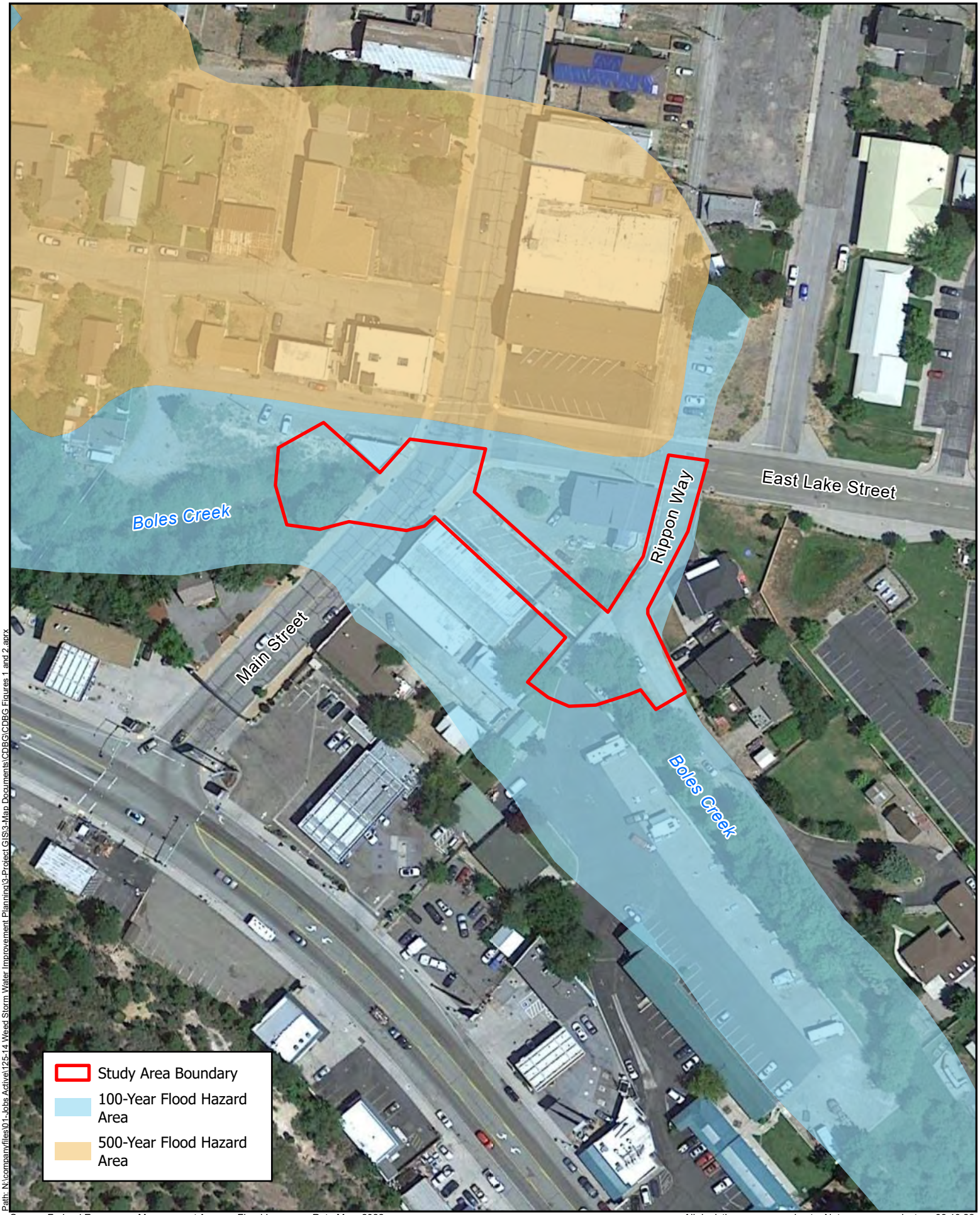

Path: N:\companyfiles\01-Jobs Active\125-14 Weed Storm Water Improvement Planning\3-Project GIS\3-Map Documents\CDBG\CDBG Figures 1 and 2.aprx

Source: Federal Emergency Management Agency, Flood Insurance Rate Map, 2022.

All depictions are approximate. Not a survey product. 08.10.22

0 100 Feet

Figure 4.10-1

Boles Creek Flood Hazard Area

ENPLAN

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

FEDERAL

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

STATE

California Government Code

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

LOCAL

City of Weed

The City's General Plan includes goals, objectives, policies, and programs designed for the purpose of avoiding or minimizing environmental effects. The City of Weed 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 the California Environmental Quality Act (CEQA).

DISCUSSION OF IMPACTS

Question A

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

Question B

As discussed in each resource section of this Initial Study, the proposed project is consistent with applicable Policies and Objectives of the City of Weed General Plan and with the regulations 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. No additional mitigation measures are necessary.

CUMULATIVE IMPACTS

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

MITIGATION

No additional mitigation necessary.

DOCUMENTATION

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed January 2022.

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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

FEDERAL

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

STATE

Surface Mining and Reclamation Act of 1975

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

LOCAL

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

DISCUSSION OF IMPACTS

Questions A and B

The CGS does not identify any active mines within a two-mile radius of the project site; therefore, the project would have no impact on existing mining operations. According to the CGS, a SMARA mineral land classification study has not been conducted for Siskiyou County. However, the project site is in an urbanized area that is not conducive to mining operations. Therefore, the proposed project would not result in the loss of availability of a locally important mineral resource.

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, California Geological Survey. Mineral Land Classification Maps. http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc. Accessed February 2022.

_____. 2016. Mines Online. https://maps.conservation.ca.gov/mol/index.html. Accessed February 2022.

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed January 2022.

_____. 2021. City of Weed Code of Ordinances. Title 18, Zoning. https://library.municode.com/ca/weed/codes/code_of_ordinances?nodeId=TIT18ZO. Accessed February 2022.

4.13 NOISE

Would the project result in:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?	☐	☒	☐	☐
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, or dB The fundamental unit of measurement that indicates the intensity of a sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.

REGULATORY CONTEXT

FEDERAL

There are no federal 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 Weed General Plan

The City's General Plan includes the following Goals, Objectives, Policies, and Programs related to noise that are applicable to the proposed project:

Noise Element		
Goal	NS 1	A quiet and peaceful city.
Objectives	NS 1.1	Limit noise in residential areas and near sensitive receptors.
	NS 1.5	Limit noise impacts from construction-related activities
Policies	NS 1.1.1	The City shall protect residential areas and noise sensitive receptors such as schools, senior housing, worship places, and health centers from noise generating sources.
Programs	NS 1.5.1.1	Require restrictions on construction activity during nighttime when issuing construction permits.

City of Weed Municipal Code: Chapter 9.18 – Noise

The City of Weed Municipal Code establishes the maximum allowable exterior sound levels for each land use category, as summarized in **Table 4.13-1**. The Municipal Code also states that construction and demolition activities do not have to comply with exterior and interior noise standards.

Table 4.13-1
City of Weed Maximum Allowable Noise Levels

Receiving Land Use	Time Period	Exterior Noise Level dBA 15 Minute Average	Exterior Noise Level dBA Maximum
Residential	10pm - 7am	40	55
	7am - 10pm	50	65
Multiple dwelling, residential public space	10pm - 7am	45	60
	7am - 10pm	50	75
Commercial	10pm - 7am	55	70
	7am - 10pm	60	75

Source: City of Weed Municipal Code, 2020

Weed Municipal Code §9.18.080 (D) provides an exemption for temporary use of domestic power tools, construction equipment, and demolition equipment.

DISCUSSION OF IMPACTS

Question A

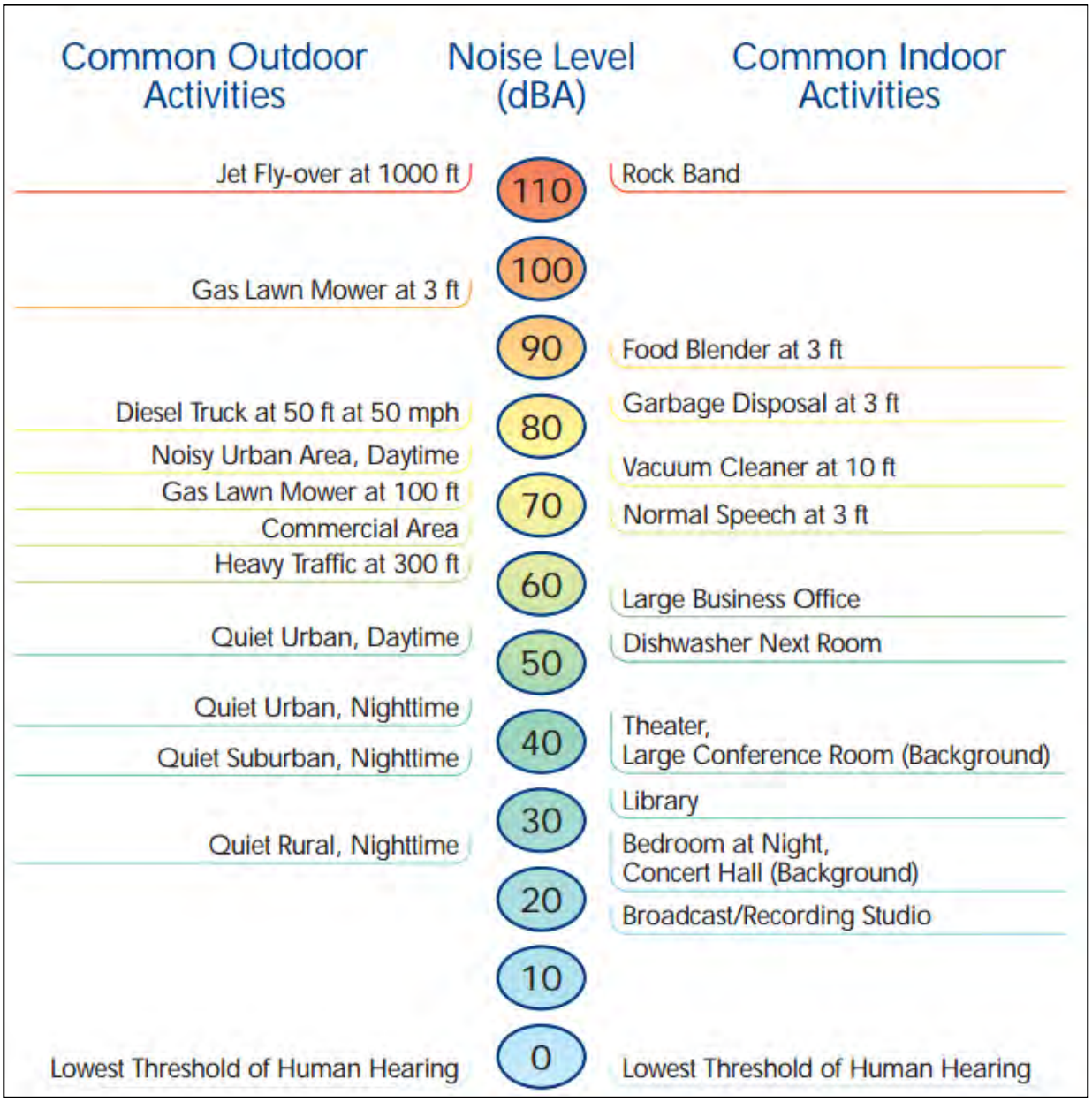
Some individuals and groups of people are considered more sensitive to noise than others and are more likely to be affected by the existence of noise. A sensitive receptor is defined as any living entity or aggregate of entities whose comfort, health, or well-being could be impaired or endangered by the existence of noise. Locations that may contain high concentrations of noise-sensitive receptors include residential areas, schools, parks, churches, hospitals, and long-term care facilities. The effects of noise on people can include annoyance, nuisance, and dissatisfaction; interference with activities such as speech, sleep, and learning; and physiological effects such as hearing loss or sudden

startling. A common method to predict human reaction to a new noise source is to compare a project's predicted noise level to the existing environment (ambient noise level). A change of 1 dBA generally cannot be perceived by humans; a 3-dBA change is considered to be a barely noticeable difference; a 5-dBA change is typically noticeable; and a 10-dBA increase is considered to be a doubling in loudness and can cause an adverse response (Caltrans, 2013).

The project does not include any components that would result in a permanent increase in noise levels in the area. Construction activities associated with the project would temporarily increase noise levels at nearby sensitive land uses. Construction would occur as close as 50 feet from single-family residences on Rippon Way and 70 feet from residential apartments on West Lake Street. Temporary traffic noise impacts along local streets would occur due to an increase in traffic from construction workers commuting to the site; however, it is not anticipated that worker commutes would significantly increase daily traffic volumes. Noise also would be generated during delivery of construction equipment and materials to the project site.

Noise impacts resulting from construction activities would depend on: 1) the noise generated by various pieces of construction equipment; 2) the timing and duration of noise-generating activities; 3) the distance between construction noise sources and noise-sensitive receptors; and 4) existing ambient noise levels. **Figure 4.13-1** shows noise levels of common activities to enable the reader to compare construction-noise with common activities. Noise levels from construction-related activities would fluctuate, depending on the number and type of construction equipment operating at any given time. As shown in **Table 4.13-2**, construction equipment anticipated to be used for project construction typically generates maximum noise levels ranging from 74 to 89 decibels (dBA) at a distance of 50 feet.

Figure 4.13-1
Noise Levels of Common Activities



Source: Caltrans, 2016.

TABLE 4.13-2
Examples of Construction Equipment
Noise Emission Levels

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

Sources: U.S. Department of Transportation, Federal Transit Administration, 2018. Federal Highway Administration, 2017.

Noise from construction activities generally attenuates at a rate of 6 dBA (on hard and flat surfaces) to 7.5 dBA (on soft surfaces, such as uneven and/or vegetated terrain) per doubling of distance. If the receptor is far from the noise source, other factors come into play. For example, barriers such as fences or buildings that break the line of sight between the source and the receiver typically reduce sound levels by at least 5 dBA. Likewise, wind can reduce noise levels by 20 to 30 dBA over long distances. In the project area, the improvements would occur between 50 and 70 feet from residences. At 50 feet, noise levels would be as shown in Table 4.13-2. At a distance of 70 feet with an attenuation rate of 6 dBA, 74 to 89 dBA noise levels would drop to 71 to 86 dBA.

Because it is a logarithmic unit of measurement, a decibel cannot be added or subtracted arithmetically. The combination of two or more identical sound pressure levels at a single location involves the addition of logarithmic quantities as shown in **Table 4.13.3.** 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 4.13-3
Cumulative Noise: Identical Sources

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

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

In addition, as shown in **Table 4.13.4**, the sum of two sounds of a different level is only slightly higher than the louder level. For example, if the sound level from one source is 80 dB, and the sound level from the second source is 85 dB, the level from both sources together would be 86 dB; if the sound level from one source is 80, and the sound level from the second source is 89 dB, the level from both sources together would be 89.5.

TABLE 4.13-4
Cumulative Noise: Different Sources

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

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

With two pieces of equipment with a noise level of 89 dBA operating simultaneously noise levels could reach approximately 92 dBA at the exterior of single-family residences within 50 feet of the work area and 89 dbA at 70 feet.

As noted above, assuming typical California construction methods, interior noise levels are about 10 to 15 dBA lower than exterior levels within residential units with the windows partially open, and approximately 20 to 25 decibels lower than exterior noise levels with the windows closed. Interior noise levels could reach 67 to 72 dBA when equipment operates within 50 feet of a residence and 66 to 61 dBA within 70 feet, provided that the windows were closed.

In addition, OSHA regulations (Title 29 CFR, §1926.601(b)(4)(i) and (ii) and §1926.602(a)(9)(ii)) state that no employer shall use any motor vehicle, earthmoving, or compacting equipment that has an obstructed view to the rear unless the vehicle has a reverse signal alarm audible above the

surrounding noise level or the vehicle is backed up only when an observer signals that it is safe to do so. Although these regulations require an alarm to be only at a level that is distinguishable from the surrounding noise level (~5 dB), some construction vehicles are pre-equipped with non-adjustable alarms that range from 97 to 112 dBA; such noise levels could temporarily be experienced at the exterior of single-family residences within 50 feet of the work areas. Depending on the decibel level of the alarm, interior noise levels could reach 87 to 92 dBA, provided that the windows were closed.

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

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

In the worst-case scenario, exterior noise levels from construction equipment operation could reach approximately 92 dBA at the exterior of single-family residences within 50 feet of the work areas and could reach approximately 112 dBA if reverse signal alarms are used. However, construction equipment does not operate continuously throughout the entire work day. In addition, reverse signal alarms are needed only intermittently, and each occurrence involves only seconds of elevated noise levels. Therefore, while construction noise may reach considerable levels for short instances, much of the time the construction noise levels at the nearby residences would be moderate.

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

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

Question B

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

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

human annoyance. The Caltrans Transportation and Construction Vibration Guidance Manual (2020), was referenced in the analysis of construction-related vibration impacts.

Table 4.13-5 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 4.13-5
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 4.13-6 indicates the potential for annoyance to humans as a result of ground-borne vibration.

TABLE 4.13-6
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 4.13-7 indicates vibration levels for various types of construction equipment that may be used for the proposed project.

TABLE 4.13-7
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:

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

In this equation, PPV_{Ref} = reference PPV at 25 feet, D = distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through ground).

Based on this equation, a vibratory roller at a distance of 50 feet would generate a PPV of 0.11 inches per second, while a large bulldozer would generate a PPV of up to 0.04 inches per second. As shown in **Table 4.13-6**, these vibration levels would be distinctly perceptible to strongly perceptible but would not rise to a level that would be considered disturbing.

In addition, as shown in **Table 4.13-5**, vibration levels would not be at a level that would cause structural damage. Because increased ground-borne vibration is temporary and would cease at completion of the project, and **Mitigation Measure MM 4.13.1** would reduce the potential for human annoyance by limiting construction hours, impacts would be less than significant.

Question C

See discussion in Section 4.9 under Question E. The nearest public airport is Weed Airport, approximately five miles northwest of the project site. The FAA does not identify any private airstrips in the project area. 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 a permanent increase in noise or groundborne vibration levels. A temporary increase in daytime noise and vibration levels would occur during construction activities; however, with implementation of **Mitigation Measures 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 the daytime hours of 7:00 A.M. to 7:00 P.M., Monday through Saturday. Construction activities shall be prohibited on Sundays and federal/state recognized holidays. Exceptions to these limitations may be approved by the City of Weed 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 farthest practical distance from nearby noise-sensitive land uses.

DOCUMENTATION

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U.S. Government Publishing Office. 2013. California Code of Regulations, Title 29, Part 1926 (Safety and Health Regulations for Construction). https://www.gpo.gov/fdsys/pkg/CFR-2013-title29-vol8/pdf/CFR-2013-title29-vol8-part1926.pdf. Accessed February 2022.

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

FEDERAL

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

STATE

California Government Code §65581

California Government Code §65581 *et seq.* requires a Housing Element to be included in all city and county General Plans. State Housing Element law mandates that jurisdictions provide sufficient land to accommodate a variety of housing opportunities for all economic segments of the community. Compliance with this requirement is measured by the jurisdiction's ability to provide adequate land to accommodate a

share of the region's projected housing needs for the applicable planning period. This share is known as the Regional Housing Needs Allocation (RHNA).

LOCAL

City of Weed General Plan

Although the City of Weed General Plan contains a number of Goals, Objectives, Policies, and Programs related to population and housing, none are applicable to the proposed project.

DISCUSSION OF IMPACTS

Question A

A project would induce unplanned population growth if it conflicted with a local land use plan (e.g., a General Plan) and induced growth in areas that aren't addressed in a General Plan or other land use plan. As stated in Section 3.1 (Project Background, Need, and Objectives), the purpose of the proposed project is to prevent flooding and ensure the health and safety of residents living and working in downtown Weed. The improvements would not induce substantial unplanned population growth in the area, either directly or indirectly. Therefore, there would be no impact.

Question B

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

CUMULATIVE IMPACTS

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

MITIGATION

None necessary.

DOCUMENTATION

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed February 2022.

4.15 PUBLIC SERVICES

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

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Fire protection?	☐	☐	☐	☒
b. Police protection?	☐	☐	☐	☒
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other public facilities?	☐	☐	☐	☒

REGULATORY CONTEXT

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

LOCAL

City of Weed

Although the City of Weed General Plan contains a number of Goals, Objectives, Policies, and Programs related to public services, none are applicable to the proposed project.

DISCUSSION OF IMPACTS

Questions A through E

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

CUMULATIVE IMPACTS

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

MITIGATION

None necessary

DOCUMENTATION

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed February 2022.

4.16 RECREATION

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
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 or State regulations pertaining to recreation that apply to the proposed project.

LOCAL

City of Weed

Although the City of Weed General Plan contains a number of Goals, Objectives, Policies, and Programs related to recreation, none are applicable to the proposed project.

DISCUSSION OF IMPACTS

Questions A and B

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

CUMULATIVE IMPACTS

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

MITIGATION

None necessary

DOCUMENTATION

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed February 2022

4.17 TRANSPORTATION

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☐	☒
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

FEDERAL

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

STATE

California Streets and Highways Code

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

LOCAL

Siskiyou County

According to the Initial Study for the 2016 Siskiyou County Regional Transportation Plan (RTP), Siskiyou County has experienced relatively slow growth in population (approximately 0.1 percent per year between 2000 and 2010) and is forecast to generally continue this trend through 2035. Based on this trend and the guidelines established in the 2010 RTP guidelines, the County is not required to run a network travel demand model to estimate vehicles miles traveled (VMT). The County is expected to comply with future AB 32 emissions limits, due in part to low VMT.

City of Weed

Although the City of Weed General Plan contains a number of Goals, Objectives, Policies, and Programs related to transportation, none are applicable to the proposed project.

DISCUSSION OF IMPACTS

Questions A through C

The proposed project does not include the construction of housing or commercial/industrial development that would cause a permanent increase in traffic or VMT in the area. 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, or increase the potential for hazards due to a design feature or incompatible uses. Because the project would not

result in a permanent increase in VMT, and no permanent impacts to the circulation system would occur, there would be no impact.

Question 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, and this increased traffic could interfere with emergency response times. However, temporary traffic control is required and must adhere to the California MUTCD. Driveway access to private properties must be maintained at all times. Because safety measures would be employed to safeguard travel by the general public and emergency response vehicles during construction, impacts would be less than significant.

CUMULATIVE IMPACTS

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

MITIGATION

None necessary.

DOCUMENTATION

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City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed February 2022.

4.18 TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code (PRC) Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. A resource listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC §5020.1(k)?	☐	☒	☐	☐
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

FEDERAL

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

STATE

California Environmental Quality Act

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

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

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

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

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the CRHR; or are included in a local register of historical resources as defined in PRC §5020.1(k).
2. A resource determined by the lead agency, taking into consideration the significance of the resource to a California Native American tribe, to be significant pursuant to criteria set forth in PRC §5024.1(c).

In addition, a cultural landscape that meets one of these criteria 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 §21084.1, a unique archaeological resource as defined in §21083.2(g), or a "nonunique archaeological resource" as defined in §21083.2(h) may also be a tribal cultural resource if it meets one of these criteria.

LOCAL

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

DISCUSSION OF IMPACTS

Questions A and B

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

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

MITIGATION

Implementation of **Mitigation Measures MM 4.5.1 and 4.5.2.**

DOCUMENTATION

ENPLAN. 2022. Cultural Resources Inventory: Boles Creek Storm Water Improvement Project. Confidential document on file at NEIC/CHRIS.

4.19 UTILITIES AND SERVICE SYSTEMS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
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 or local regulations pertaining to utilities and service systems that apply to the proposed project.

STATE

California Integrated Waste Management Act of 1989

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

DISCUSSION OF IMPACTS

Question A

As discussed in Section 4.14 under Question A, the proposed project would not induce population growth in the area, either directly or indirectly. Therefore, the proposed project would not result in the need for new or expanded water, wastewater treatment, electric power, natural gas, or telecommunications facilities. A water main is currently located beneath the existing concrete channel and would be rerouted to run over the new box culvert. No sewer, electric power, natural gas, or telecommunications facilities would need to be relocated to accommodate the proposed project. Impacts would be less than significant.

Questions B and C

Relatively small amounts of water would be used during project construction, but this is a temporary impact. In addition, the project would have no demand for wastewater treatment. Therefore, there would be no impact.

Questions D and E

The proposed project would not result in a long-term demand for additional solid waste services. Solid waste would be generated during construction, primarily from removal of pavement to accommodate installation of the headwall and box culvert. Construction debris would be disposed of at the Black Butte Transfer Station, located 5.6 miles south of the City. The Black Butte Transfer Station is permitted through the California Integrated Waste Management Board (CIWMB). The maximum permitted throughput is 100 tons per day. The Transfer Station is subject to periodic inspections by Siskiyou County to ensure compliance with the CIWMB permit. Although the transfer station occasionally reaches capacity and is unable to accept additional waste on certain days, waste and recycled materials can be disposed of at another transfer station in the County. The City partners with adjacent communities and the County of Siskiyou in recycling efforts to divert waste away from dumps.

Because there are no active landfills in Siskiyou County, all solid waste in the County is trucked to the Dry Creek Landfill in southern Oregon. The Dry Creek Landfill was expanded to a regional facility in 1999 and has a projected operational life exceeding 100 years.

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, there would be no impact.

CUMULATIVE IMPACTS

Utility and service systems in the area would not experience a permanent increase in demand for services over existing conditions. Although solid waste would be generated during construction, no permanent increase in solid waste generation would occur. Therefore, the proposed project would have less than significant cumulative impacts to utility and service systems.

MITIGATION

None necessary

DOCUMENTATION

CalRecycle. 2019. Solid Waste Information System, Facility Information/Site Activities, Black Butte Transfer Station. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Index/4147. Accessed February 2022.

4.20 WILDFIRE

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

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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

FEDERAL

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

STATE

California Department of Forestry and Fire Protection (CAL FIRE)

The Bates Bill (AB 337), enacted in 1992, required CAL FIRE to work with local governments to identify high fire hazard severity zones throughout each county in the State. CAL FIRE adopted Fire Hazard Severity Zone (FHSZ) Maps for State Responsibility Areas (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.

California Fire Code

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

LOCAL

City of Weed

The City's General Plan includes the following Goal, Objective, Policies, and Programs related to wildfire:

Safety Element		
Goal	SF 3	A community protected from natural and manmade hazards.
Objective	SF 3.3	Protect property and life from fire hazards.
Policies	SF 3.3.1	Identify and maintain emergency evacuation routes.

DISCUSSION OF IMPACTS

According to FHSZ maps prepared by CAL FIRE, the project area is located within a Local Responsibility Area and is not designated as a FHSZ.

Question A

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

Questions B and C

The project includes replacing and upsizing the existing concrete channel with a new concrete box culvert in the same location. These improvements would not expose people or structures to wildland fires and would not exacerbate fire risk in the long-term. Further, proposed improvements would occur primarily in paved areas that are devoid of heavy vegetation or other flammable materials. There are no factors such as slope or prevailing winds that would increase the potential for a wildfire in the area that could result in pollutant concentrations from a wildfire or uncontrolled spread of a wildfire. Therefore, impacts would be less than significant.

Question D

As discussed in Section 4.7 (Geology and Soils) under Question A (iv), the project area is at low risk of landslide hazards. Although improvements would be completed within the 100-year flood zone of Boles Creek, the project does not include any components that would increase flood risks; rather, the project would decrease the potential for flood risks in the area. Therefore, there is a low potential for downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes; therefore, the potential for post-fire impacts would be less than significant.

CUMULATIVE IMPACTS

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

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

MITIGATION

None necessary.

DOCUMENTATION

California Department of Forestry and Fire Protection (CAL FIRE). 2021. Fire Hazard Severity Zone Map Viewer. https://egis.fire.ca.gov/FHSZ/. Accessed February 2022.

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed January 2022.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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 above, the proposed project could result in possible aesthetic impacts, effects to special-status wildlife species, disturbance of nesting migratory birds (if present), the introduction and spread of noxious weeds during construction, impacts to cultural resources and tribal cultural resources (if present), temporarily increased air emissions, and temporarily increased noise and vibration levels. However, as identified in Section 1.10, mitigation measures are included to reduce all potential impacts to a less than significant level.

Question B

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

Question C

As discussed in the applicable environmental resource sections above, the proposed project could result in adverse effects on human beings due to temporarily increased risk of wildfires, temporarily increased air emissions, and temporarily increased noise and vibration levels. However, mitigation measures are included to reduce all potential impacts to a less than significant level.

SECTION 5.0 LIST OF PREPARERS

ENPLAN

Donald Burk ..... Environmental Services Manager
Carla L. Thompson, AICP ..... Senior Environmental Planner
Kiara Cuerpo-Hadsall ..... Environmental Planner
Hannah Raab ..... Environmental Planner
Sabrina Rouse ..... Environmental Planner
Allison Loveless ..... Environmental Scientist
Julie Cassidy ..... Archaeologist

City of Weed

Craig Sharp ..... Public Works Director
Tim Rundel, MPA ..... City Manager
Sandra Duchi ..... City Clerk

PACE Engineering

Paul Reuter, P.E. ..... Managing Engineer/President
Seth Petrie, P.E. ..... Civil Engineer

SECTION 6.0 ABBREVIATIONS AND ACRONYMNS

AB	Assembly Bill
APE	Area of Potential Effects
BMP	Best Management Practice
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	Criteria Air Pollutants
CARB	California Air Resources Board
CASGEM	California Statewide Groundwater Elevation Monitoring
CBC	California Building Code
CBSC	California Building Standards Code
CCR	California Code of Regulations
CDBG	Community Development Block Grant
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGC	California Government Code
CGS	California Geological Survey
CH_4	Methane
City	City of Weed
CIWMA	California Integrated Waste Management Act
CIWMB	California Integrated Waste Management Board
CNDDB	California Natural Diversity Data Base
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
CUPA	Certified Unified Program Agencies
CWA	Clean Water Act
CY	Cubic Yard

dBA	Decibels
DOC	Department of Conservation
DTSC	California Department of Toxic Substances Control
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO	Executive Order
°F	Fahrenheit
FEMA	Federal Emergency Management Act
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FMMP	Farmland Mapping and Monitoring Program
GSA	Groundwater Sustainability Agency
GC	General Commercial
GHG	Greenhouse Gas Emissions
GSP	Groundwater Sustainability Plan
GWP	Global Warming Potential
HAWK	High-intensity Activated Crosswalk
H_2S	Hydrogen Sulfide
HCD	California Department of Housing and Community Development
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbon
HSC	California Health and Safety Code
HUD	U.S. Department of Housing and Urban Development
IBC	International Building Code
I-5	Interstate 5
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
mg/m^3	Milligrams per Cubic Meter
MM	Mitigation Measure
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MUTCD	Manual for Uniform Traffic Control Devices

NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NCRWQCB	North Coast Regional Water Quality Control Board
NEHR	National Earthquake Hazards Reduction
NEIC/CHRIS	Northeast Information Center/California Historical Resources Information System
NF_3	Nitrogen Trifluoride
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
N_2	Nitrogen
N_2O	Nitrous Oxide
NOI	Notice of Intent
NO_2	Nitrogen Dioxide
NO_X	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPA	California Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
O_2	Oxygen
O_3	Ozone
OHWM	Ordinary High Water Mark
OSHA	Occupational Safety and Health Administration
Pb	Lead
PCP	Pentachlorophenol
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
PRC	Public Resources Code
PVC	Polyvinyl Chloride
PPV	Peak Particle Velocity
RC	Retail Commercial
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Allocation
RMP	Risk Management Plan
ROG	Reactive Organic Gases
ROW	Right-of-Way
RPS	Renewables Portfolio Standard

RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SB	Senate Bill
SCAPCD	Siskiyou County Air Pollution Control District
SCPHD	Siskiyou County Public Health Department
SF_6	Sulfur Hexafluoride
SGMA	Sustainable Groundwater Management Act
SHMA	Seismic Hazards Mapping Act
SMARA	Surface Mining and Reclamation Act
SO_2	Sulfur Dioxide
SO_4	Sulfates
SRA	State Responsibility Area
SSC	Species of Special Concern
STAGE	Siskiyou Transit and General Express
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCP	Timberland Conversion Permit
THP	Timber Harvesting Plan
TPH	Total Petroleum Hydrocarbons
TPZ	Timberland Production Zone
U.S.	United States
U.S. 97	U.S. Route 97
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle Miles Traveled
WDR	Waste Discharge Requirement
WPCP	Water Pollution Control Plan
WVFD	Weed Volunteer Fire Department
$\mu g/m^3$	Micrograms per Cubic Meter

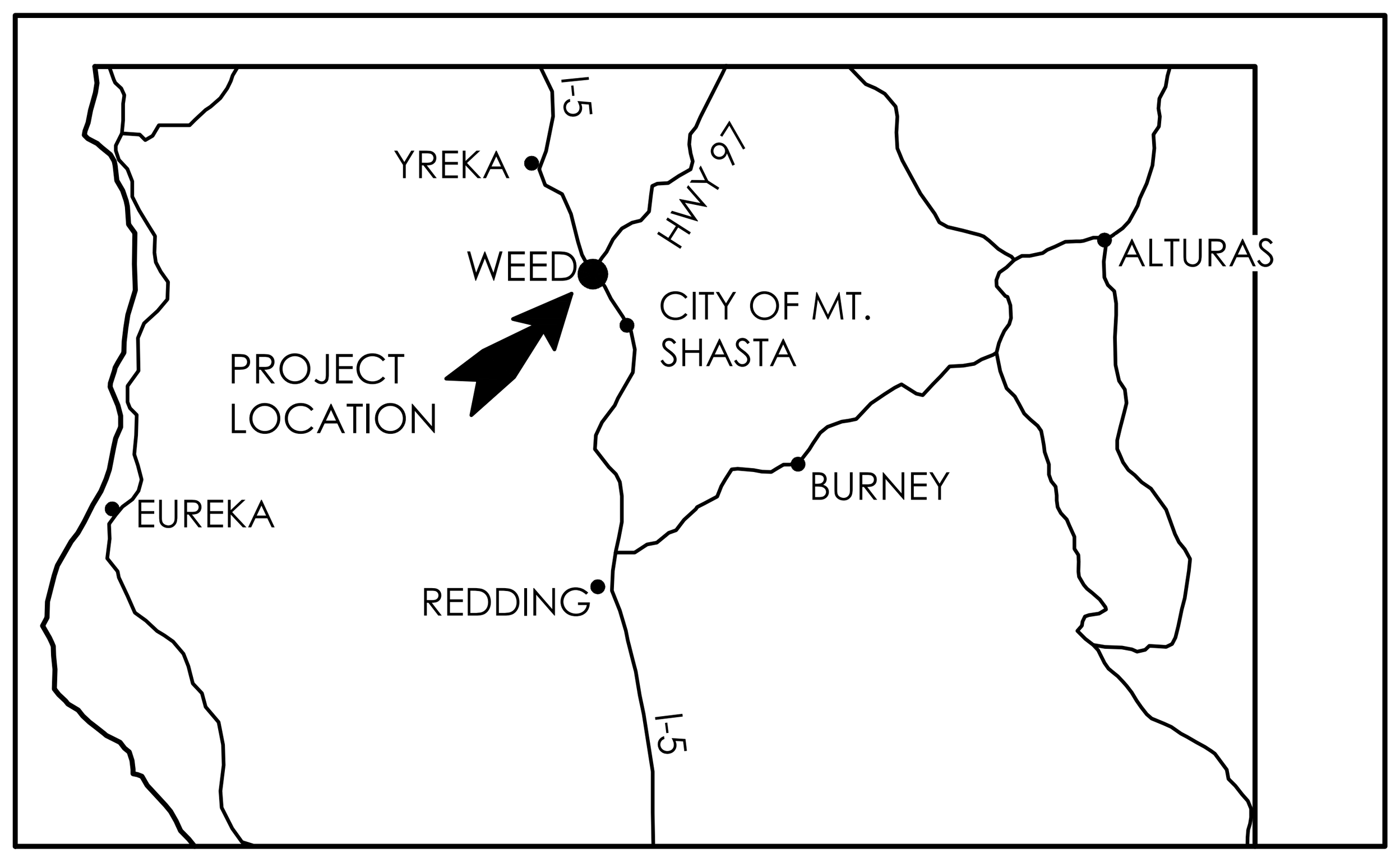
Appendix A

Project Plans

CITY OF WEED

BOLES CREEK STORM WATER IMPROVEMENT PROJECT

FUNDED BY COMMUNITY DEVELOPMENT BLOCK GRANT NO. XXX



LOCATION MAP

VICINITY MAP

CITY STAFF

TIM RUNDEL	CITY MANAGER
CRAIG SHARP	PUBLIC WORKS DIRECTOR
CHRIS DAVIS	PUBLIC WORKS SUPERVISOR
SANDRA DUCHI	CITY CLERK

PACE DESIGN TEAM

SETH PETRIE	PROJECT MANAGER
SHAWN WADE	STRUCTURAL ENGINEER
ANDY KING	GEOTECHNICAL ENGINEER CONSULTANT

NOTES

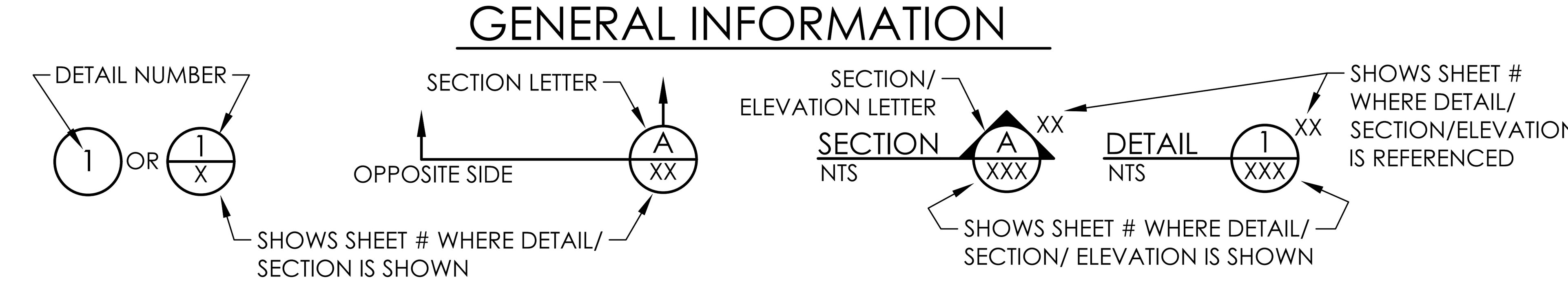
1. THE CONSTRUCTION AND INSTALLATION OF IMPROVEMENTS SHALL CONFORM TO THESE PLANS, THE CITY OF WEED CONSTRUCTION STANDARDS, STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION 2018 STANDARD PLANS AND SPECIFICATIONS, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK), AND THE SOILS REPORT PREPARED BY KC ENGINEERING DATED (TBD), 20222.
2. CALL USA (1-800-227-2600) TO LOCATE ALL UTILITIES 48 HOURS PRIOR TO ANY CONSTRUCTION.
3. THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT PRIOR TO ANY WORK IN THE STREET RIGHT-OF-WAY.
4. REMOVE TREES IN CUT/FILL AREAS EXCEPT THOSE SHOWN TO REMAIN. AVOID DRIVING UNDER TREES WHERE POSSIBLE.
5. USE CLASS "A" TRENCH BACKFILL FOR STORM DRAIN EXCEPT WHERE SHOWN OTHERWISE.
6. ALL GRADES SHOWN ARE FINISH GRADES. ALLOW FOR VARIOUS THICKNESS OF BASE, PAVING AND CONCRETE IN PREPARING SUBGRADE. GRADE SITE TO THE GRADES SHOWN. COMPACT FILL AREAS AND TOP 6" OF CUT AREAS TO 95% OF MAXIMUM DENSITY AS MEASURED BY ASTM D-1557. IMPORT OR EXPORT AS NECESSARY.
7. ALL AREAS TO RECEIVE FILL ARE TO BE SCARIFIED A MINIMUM DEPTH OF 8", MOISTURE CONDITIONED, AND COMPACTED TO 90% OF MAXIMUM DENSITY AS MEASURED BY ASTM D-1557.
8. ANY CHANGES IN THESE PLANS ARE TO RECEIVE PRIOR APPROVAL OF THE CITY OF WEED AND PACE ENGINEERING, INC.
9. ALL SITE CONCRETE SHALL BE CLASS 520-C-2500 WITH 4" MAXIMUM SLUMP, AND 4½-6% MAXIMUM AIR ENTRAINMENT UNLESS OTHERWISE SHOWN. APPLY LIGHT BROOM FINISH TO ALL WALKWAYS. CONSTRUCT 1" DEEP TOOLED JOINT AT 5 FEET O/C. CONSTRUCT ½" EXPANSION JOINT, WITH EXPANSION JOINT FILLER, AT 20 FEET O/C.
10. HOT MIX ASPHALT (HMA) SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD SPECIFICATIONS FOR BE TYPE A, 1/2-INCH MAXIMUM SIZE AGGREGATE. ASPHALT BINDER SHALL BE PG 64-28 (COLD WEATHER REGIONS), OR APPROVED EQUAL.
11. AGGREGATE BASE SHALL BE 3/4" CLASS 2 AGGREGATE BASE PER STATE SPECIFICATIONS, SECTION 26. COMPACT TO 95% OF MAXIMUM DENSITY AS MEASURED BY ASTM D-1557.
12. POTHOLE AND VERIFY LOCATIONS OF ALL PIPE AND UTILITY CROSSINGS PRIOR TO CONSTRUCTION.
13. ALL BRUSH PILES CREATED CLEARING SHALL BE ABATED PRIOR TO THE NEXT FIRE SEASON.
14. HYDROSEED ALL CUT AND FILL AREAS THAT ARE NOT SURFACED WITH ASPHALT, CONCRETE, OR AGGREGATE BASE.

ABBREVIATIONS

AB	AGGREGATE BASE	INV	INVERT
AD	AREA DRAIN	LF	LINEAL FEET
BOT	BOTTOM	L/S	LANDSCAPING
CB	CATCH BASIN	MH	MANHOLE
CL	CENTERLINE	(N)	NEW
CMP	CORRUGATED METAL PIPE	O/H	OVERHEAD
CO	CLEANOUT	PED	PEDESTAL
CORCS	CITY OF REDDING CONSTRUCTION STANDARDS	PH	PHONE
		R/W	RIGHT-OF-WAY
CP	CONTROL POINT	S	SLOPE
CR	CURB RETURN	SD	STORM DRAIN
CRCP	CONTINUALLY REINFORCED CONCRETE PAVEMENT	SDMH	STORM DRAIN MANHOLE
		SS	SANITARY SEWER
DI	DROP INLET	SSCO	SANITARY SEWER CLEANOUT
D/W	DRIVEWAY	SSMH	SANITARY SEWER MANHOLE
(E)	EXISTING	SSRH	SANITARY SEWER RODHOLE
EG	EXISTING GRADE	STD	STANDARD
ELEC	ELECTRICAL	TBC	TOP BACK OF CURB
EL/ELEV	ELEVATION	TC	TOP CONC/CURB
FG	FINISH GRADE	TW	TOP OF WALL
FH	FIRE HYDRANT	TYP	TYPICAL
FL	FLOWLINE	UG	UNDERGROUND
FP	FINISH PAVEMENT	UNO	UNLESS NOTED OTHERWISE
GR	GRATE	W	WATER
GV	GAS VALVE	WM	WATER METER
HDPE	HIGH DENSITY POLYETHYLENE	WS	WATER SERVICE
HMA	HOT MIX ASPHALT	WV	WATER VALVE

SHEET INDEX		
NO	DESCRIPITON	SHEET NAME
1	G1.0	TITLE SHEET
2	C1.0	TOPOGRAPHIC MAP
3	C1.1	DEMOLITION PLAN
4	C1.1	GRADING PLAN
5	C1.2	PROFILES AND DETAILS
6	C1.3	UTILITY PLAN
7	C2.0	DETAILS 1
8	C2.1	DETAILS 2

GENERAL INFORMATION



DETAIL CALLOUT

SECTION MARKERS

DETAIL/SECTION/ELEVATION TITLE WHERE SHOWN

PRELIMINARY NOT FOR CONSTRUCTION

PACE ENGINEERING

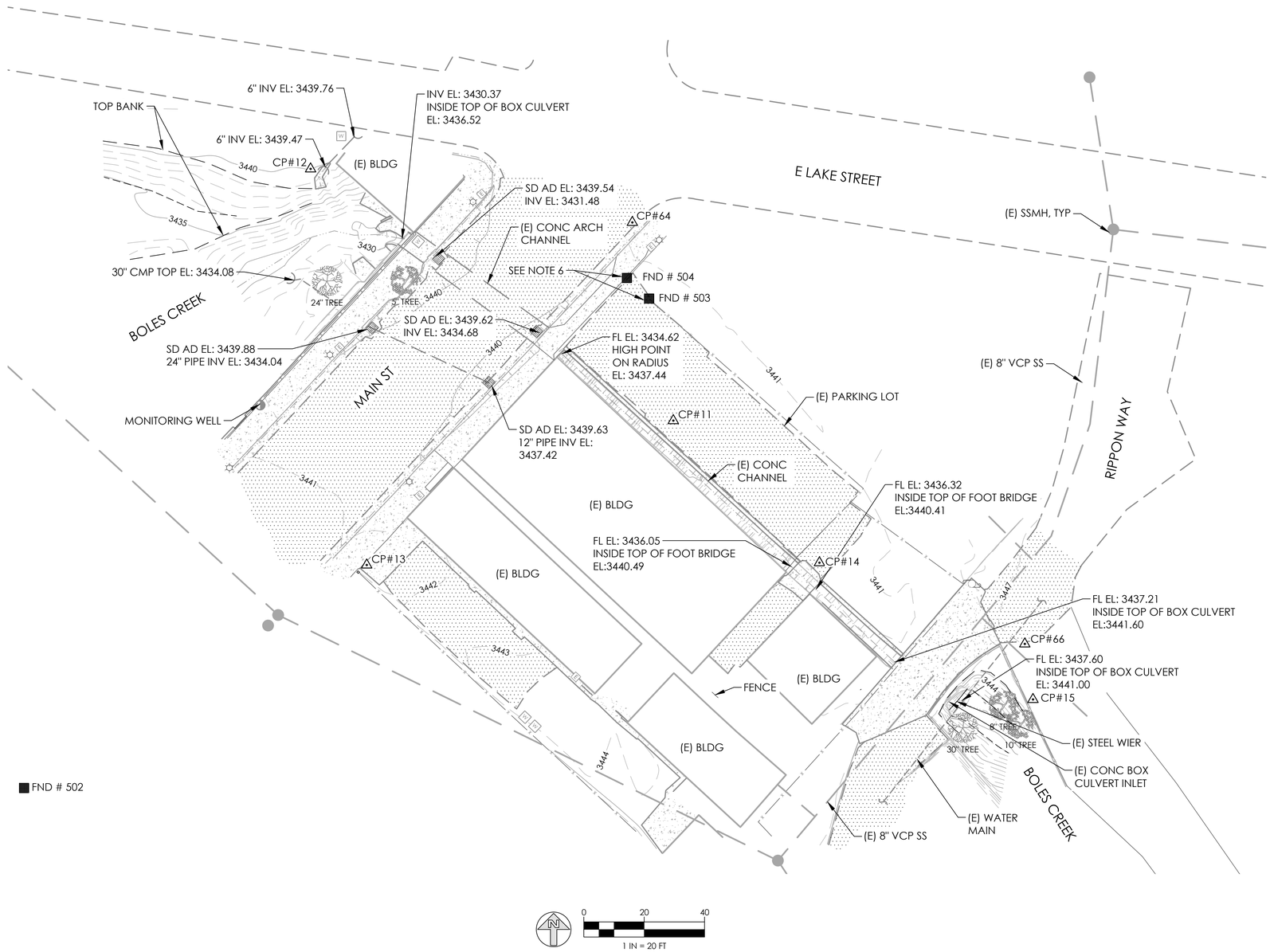
2/9/22

0161.105

SHEET

G1.0

PG 1 OF 8



LINE LEGEND

- (E) EP
- (E) CONC
- PROPERTY LINE
- FLOWLINE
- (E) STORM DRAIN
- (E) SANITARY SEWER
- (E) FENCE
- (E) TOP OF BANK
- (E) TOE OF BANK

HATCH LEGEND

- (E) CONCRETE
- (E) PAVEMENT

ABBREVIATIONS

AD	AREA DRAIN
CMP	CORRUGATED METAL PIPE
CP	CONTROL POINT
(E)	EXISTING
EL/ELEV	ELEVATION
FL	FLOWLINE
INV	INVERT
MH	MANHOLE
SD	STORM DRAIN
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
TYP	TYPICAL

SYMBOL LEGEND

- AREA DRAIN
- CP# CONTROL POINT
- CULVERT
- ELECTRICAL PANEL / BOX
- FOUND MONUMENT AS NOTED
- LIGHT POLE
- POLE- JOINT UTILITY
- SANITARY SEWER MANHOLE
- STORM DRAIN CATCH BASIN
- TREE/SHRUB
- WATER METER/BOX
- WELL

GENERAL NOTES:

1. THIS SURVEY WAS CONDUCTED ON 07/29/2021.
2. COORDINATE SYSTEM: CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE 1, (EPOCH 2017.5).
3. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), (GEOID 18)
4. CONTOUR INTERVAL: 1 FOOT.
5. UNITS OF MEASUREMENT SHOWN HEREON ARE IN TERMS OF THE U.S. SURVEY FOOT AND DECIMALS THEREOF.
6. CONTRACTOR TO PROTECT IN PLACE OR HIRE PLS TO CONDUCT MONUMENT PRESERVATION PRIOR TO CONSTRUCTION.

CONTROL POINT TABLE

POINT #	ELEVATION	NORTHING	EASTING	DESCRIPTION
11	3440.86'	2401751.41'	6456186.03'	CP_MAGNAIL
12	3440.06'	2401834.80'	6456065.89'	CP_MAG8&W
13	3441.50'	2401703.55'	6456084.55'	CP_MAGNAIL
14	3440.66'	2401704.31'	6456234.52'	CP_MAGNAIL
15	3446.82'	2401658.99'	6456305.22'	CP_HUB&MAGNAIL
64	3440.59'	2401817.03'	6456172.48'	FND_CP MAGNAIL&W_64
66	3447.04'	2401677.43'	6456302.51'	CP_MAG8 &W

60% PROGRESS

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS

NO	DATE	DESCRIPTION

PACE ENGINEERING

DES ____ CKD JL JOB NO. 0161.105
DRN JL DATE 2/9/22

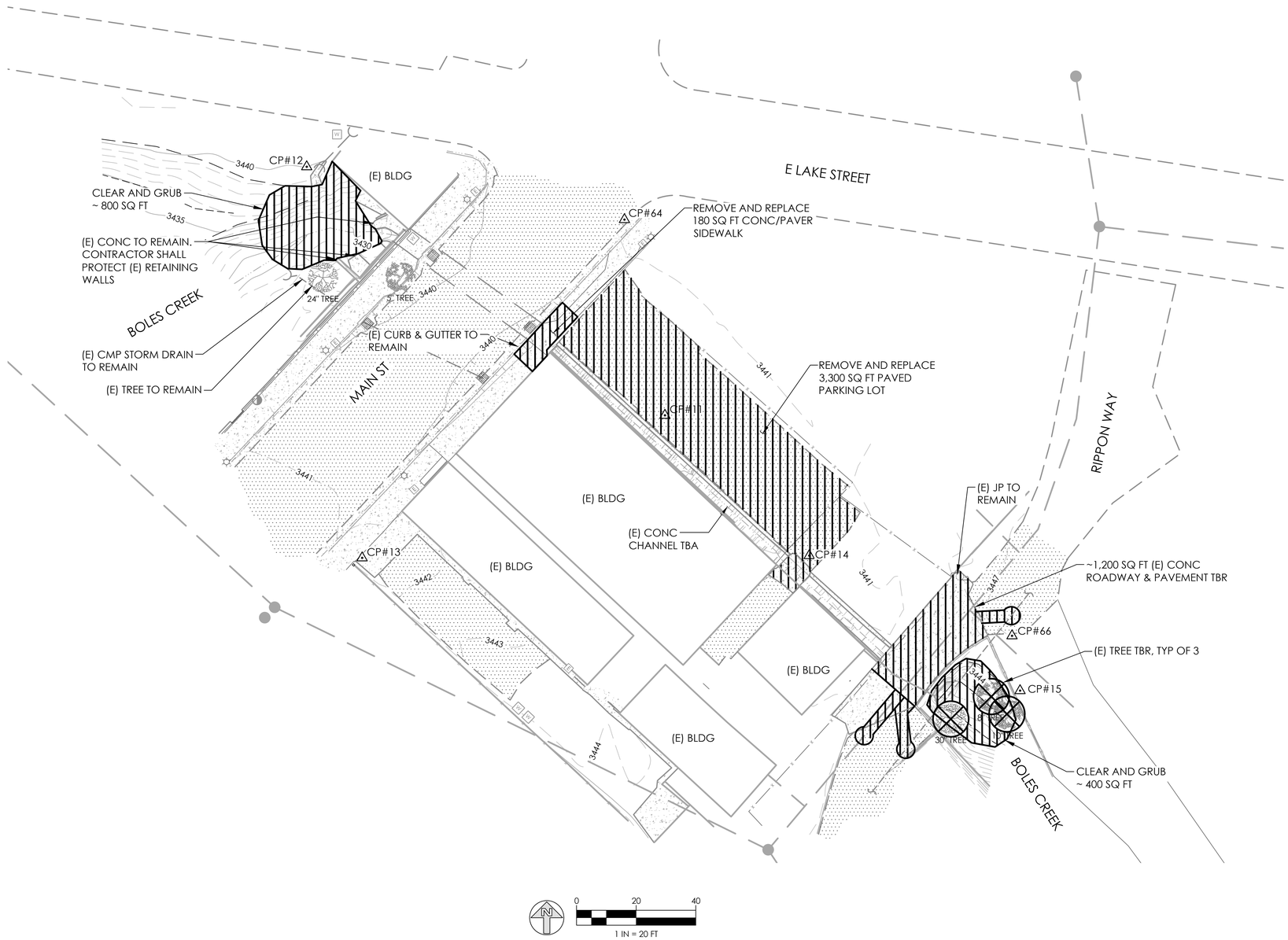
SIGNED

CITY OF WEED
BOLES CREEK STORMWATER IMPROVEMENT PROJECT

TOPOGRAPHIC MAP

SHEET
C1.0
PG 2 OF 8

Plot Date: February 09, 2022 - 10:47 am Login Name: sperrie
File Name: M:\Land Projects\061105 SW Improvement Project\Survey\Topographic Survey\dwg\ Layout: TOPO



DEMOLITION NOTES:

1. CALL USA (811 OR 1-800-227-2600) 48 HOURS PRIOR TO ANY DEMOLITION ACTIVITIES TO LOCATE UTILITIES.
2. CONTRACTOR SHALL COORDINATE AND ARRANGE FOR THE DISCONNECTION OF ALL UTILITIES BEING MODIFIED OR DEMOLISHED WITH THE OWNER AND UTILITY COMPANIES. THE CONTRACTOR SHALL PROPERLY CAP ALL UNUSED OR ABANDONED UTILITIES.
3. CONTRACTOR TO PROTECT TREES THAT ARE TO REMAIN. INSTALL SNOW FENCE AROUND THE TREE 10-FT± FROM TRUNK FOR TREES WITHIN THE PROJECT SITE THAT ARE TO REMAIN.
4. ALL DEMOLISHED MATERIALS NOT CALLED OUT IN THE DRAWINGS TO BE RETURNED TO THE OWNER ARE TO BE PROPERLY DISPOSED OF OFF-SITE.
5. THE CONTRACTOR SHALL MAINTAIN EXISTING STORM DRAINAGE SYSTEMS TO FUNCTION THROUGHOUT THE CONSTRUCTION PERIOD WITH APPROPRIATE EROSION AND SEDIMENT CONTROL DEVICES IN PLACE AS SHOWN ON SHEET __.
6. IT IS THE CONTRACTORS RESPONSIBILITY TO REMOVE AND LEGALLY DISPOSE OF ANY EXCESS FILL MATERIAL AND WASTE GENERATED DURING GRADING AND CONSTRUCTION OPERATIONS.
7. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL PROPERTY CORNER MONUMENTS, AND SHALL HAVE, AT HIS EXPENSE, ALL CORNER MONUMENTS REPLACED WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES.

DEMOLITION LEGEND

TBA	TO BE ABANDONED
TBR	TO BE REMOVED
⊗	TREES TO BE REMOVED
	DEMOLITION LINE
	DEMOLITION AREA (BLDG, CONC, SIDEWALK)

60% PROGRESS

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS

NO	DATE	DESCRIPTION

PACE ENGINEERING

DES ____ CKD JL JOB NO.
DRN JL DATE 2/9/22 0161.105

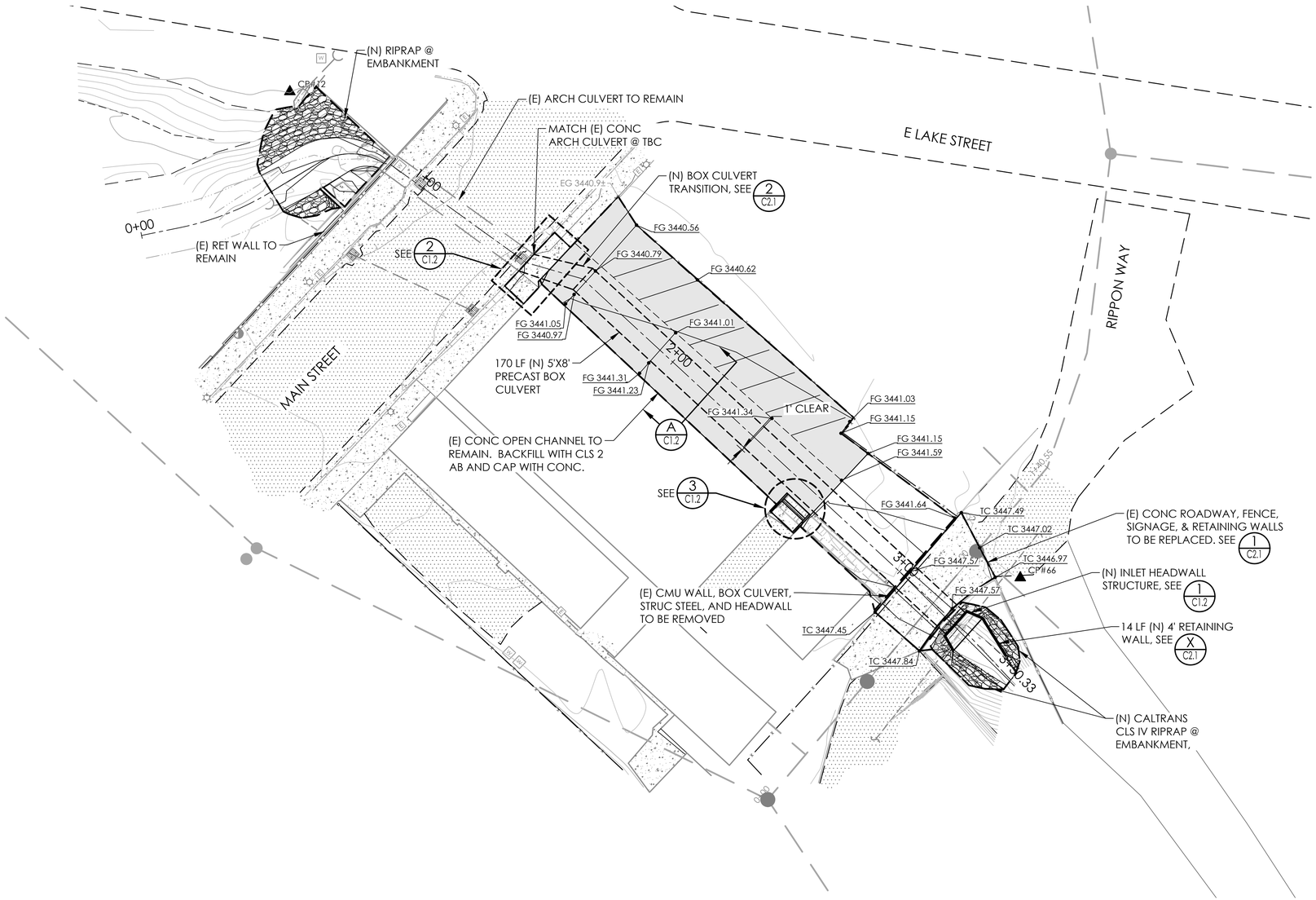
SIGNED

CITY OF WEED
BOLES CREEK STORMWATER IMPROVEMENT PROJECT

DEMOLITION PLAN

SHEET
C1.1
PG 3 OF 8

Plot Date: February 09, 2022 - 10:47 am Login Name: sjohns
File Name: M:\Land Projects\0161105 SW Improvement Project\Survey\Topographic Survey\dwg Layout: DEMO



GRADING PLAN
1"=20'

SYMBOL LEGEND

- AREA DRAIN
- CULVERT
- LIGHT POLE
- POLE-JOINT UTILITY
- POLE-POWER
- ROCK
- RIPRAP DISSIPATOR
- STORM DRAIN CATCH BASIN - TYPE 4
- TREE/SHRUB
- WATER METER/BOX
- SLOPE DIRECTION MARKERS

LINE LEGEND

- (E) EP
- (N) EP
- (E) CONC
- (N) CONC
- PROPERTY LINE
- FLOWLINE
- (E) STORM DRAIN
- (E) SANITARY SEWER
- (E) WATER LINE

HATCH LEGEND

- (E) CONCRETE
- (N) CONCRETE
- (E) PAVEMENT
- (N) PAVEMENT
- (E) AB ROAD
- (N) RIPRAP

APPROXIMATE GROSS EARTHWORK QUANTITIES (NEAT LINE)

700 CY - CUT
300 CY - FILL

THESE QUANTITIES ARE BASED ON NEAT LINE CALCULATIONS AND DO NOT INCLUDED SHRINKAGE, SWELLING, OR TRENCHING AND FOOTING SPOILS. THE ESTIMATED QUANTITIES ARE FOR BUDGETARY PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR DETERMINATION OF EARTHWORK QUANTITIES.

60% PROGRESS

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS

NO	DATE	DESCRIPTION

PACE ENGINEERING

DES	SP	CKD	PJR	JOB NO.
DRN	DP	DATE	2/9/22	0161.105

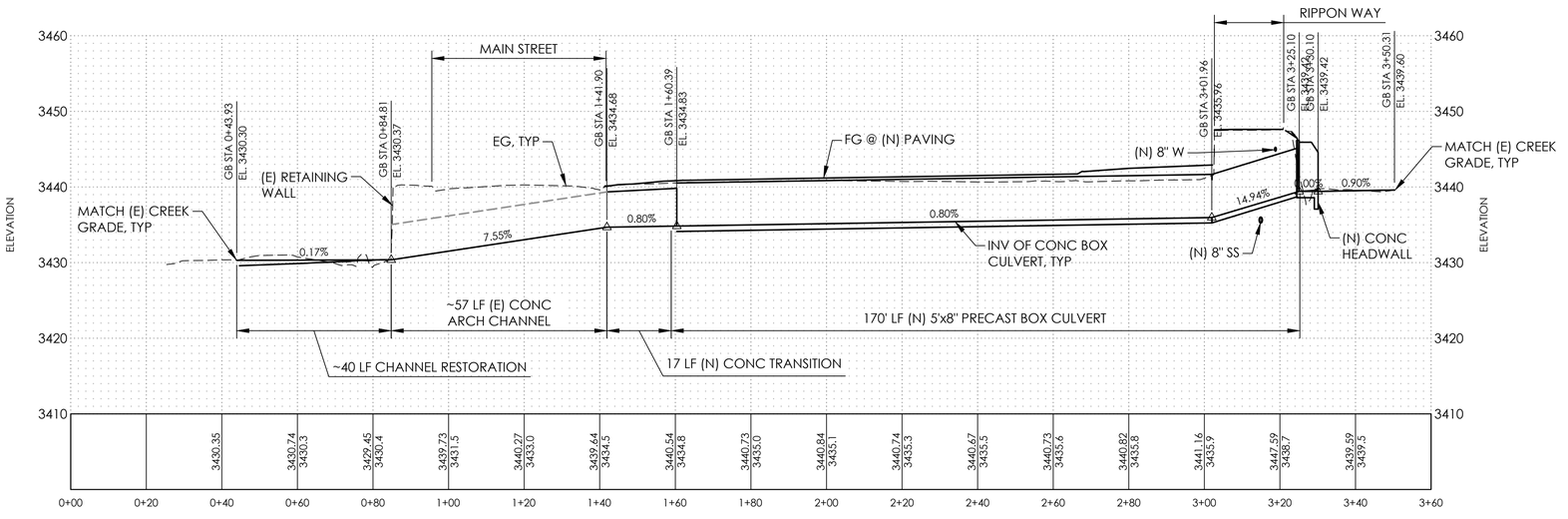
SIGNED

CITY OF WEED
BOLES CREEK STORMWATER IMPROVEMENT PROJECT

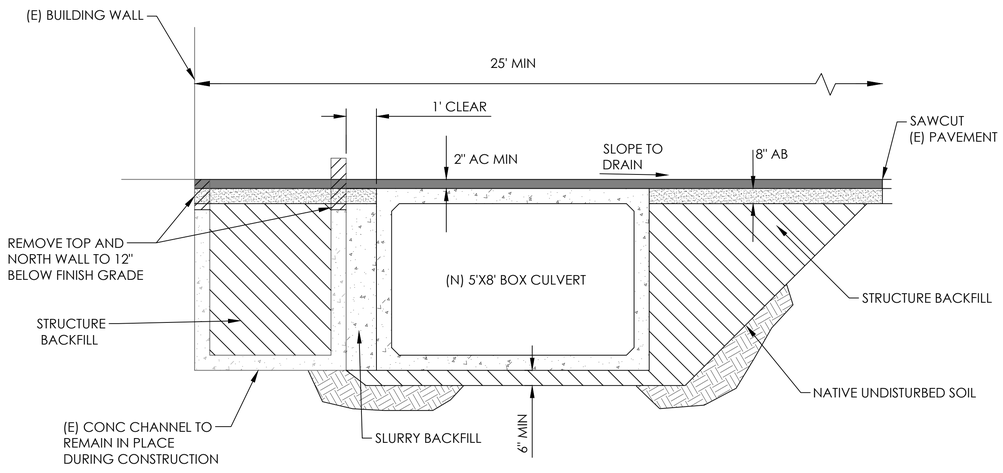
GRADING PLAN

SHEET
C1.1
PG 4 OF 8

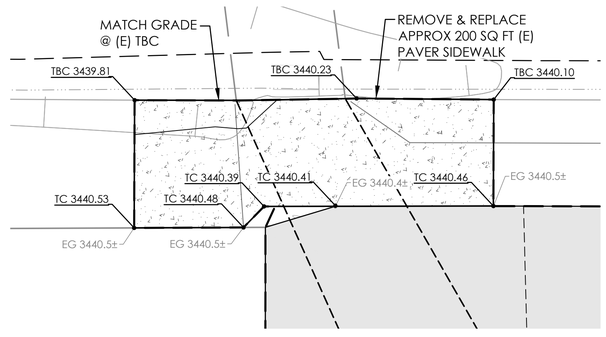
Plot Date: February 09, 2022 - 10:48 am Login Name: spothe
File Name: M:\Land Projects\0161\05 SW Improvement Project\DWG\90% CD\Grading Plan\Avg Layout GRADING



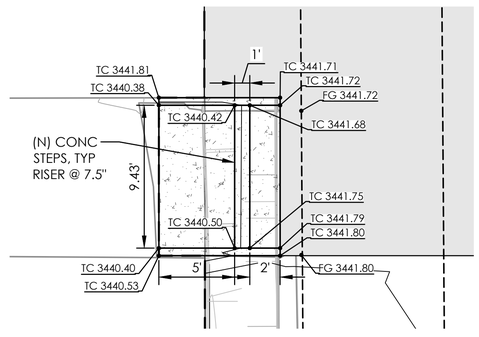
BOLES CREEK IMPROVEMENTS PROFILE
H: 1"=20'
V: 1"=10'



SECTION BACKFILL AT 5'X8' PRECAST BOX
NTS
A
C1.2

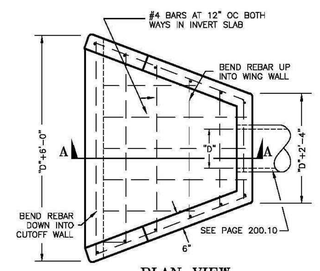


ENLARGED GRADING DETAIL
NTS
2
C1.2
C1.1

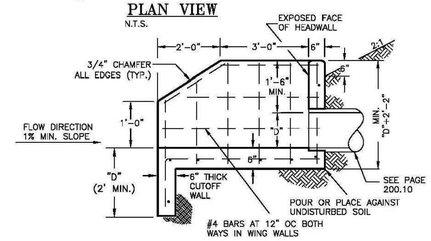


ENLARGED GRADING DETAIL
NTS
3
C1.2
C1.1

PAGE 271.00



PLAN VIEW
N.T.S.



SECTION A-A
N.T.S.

NOTES:
1. "D" EQUALS PIPE DIAMETER.
2. BACKFILL SHALL BE CLASS 'A' IN STREET R/W AND CLASS 'C' IN ALL OTHER LOCATIONS. COMPACTION REQUIREMENTS PER STD PAGE 610.00
3. ALL HEADWALLS FOR PIPE LARGER THAN 42" DIAMETER ("D") SHALL BE ENGINEERED.
4. PROVIDE GUARDRAILS/PEDESTRIAN BARRIER PER THE CALIFORNIA BUILDING CODE WHEN NECESSARY.

DWG DATE: 10/11	SCALE: NTS	CITY OF REDDING • PUBLIC WORKS DEPARTMENT • ENGINEERING DIVISION
1 / 7/13 / REVISED STD	APPROVED BY: CITY ENGINEER 10/9/13	STANDARD INLET HEADWALL STRUCTURE
MARK / DATE / REVISION		

INLET HEADWALL DETAIL
NTS
1
C1.2
C1.1

60% PROGRESS

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS		
NO	DATE	DESCRIPTION

PACE ENGINEERING

DES SP	CKD PJR	JOB NO. 0161.105
DRN DP	DATE 2/9/22	

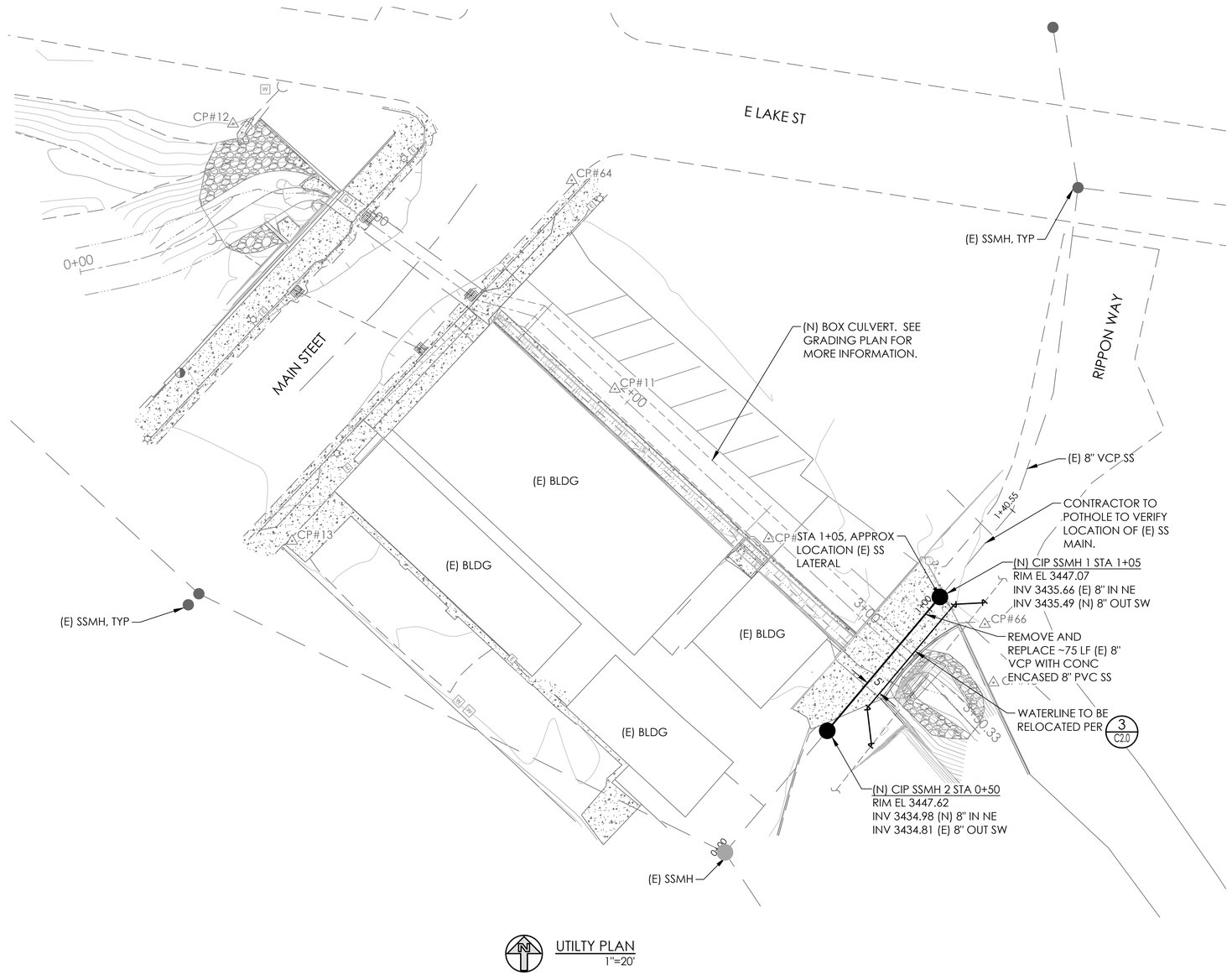
SIGNED

CITY OF WEED
BOLES CREEK STORMWATER IMPROVEMENT PROJECT

PROFILES AND DETAILS

SHEET C1.2
PG 5 OF 8

Plot Date: February 09, 2022 - 10:48 am Login Name: spotts
File Name: M:\Land Projects\0161\05 SW Improvement Project\DWGs\90% CD\Grading Plan\dwg, Layout: PROFILES



NOTES

1. THE CONSTRUCTION AND INSTALLATION OF IMPROVEMENTS SHALL CONFORM TO THESE PLANS, THE CITY OF REDDING CONSTRUCTION STANDARDS AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK).
2. CALL USA (811 OR 1-800-227-2600) TO LOCATE ALL UTILITIES 48 HOURS PRIOR TO ANY CONSTRUCTION.
3. THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT PRIOR TO ANY WORK IN THE STREET RIGHT-OF-WAY.
4. USE CLASS "A" TRENCH BACKFILL FOR UTILITY LINES EXCEPT WHERE SHOWN OTHERWISE. SEE DETAILS 1 & 2 ON SHEET C2.0
5. ANY CHANGES IN THESE PLANS ARE TO RECEIVE PRIOR APPROVAL OF PACE ENGINEERING, INC.
6. THRUST BLOCKS SHALL BE INSTALLED AT ALL ELBOWS, TEES, BENDS AND DEAD ENDS ALONG THE WATER LINE.
7. POTHOLE AND VERIFY LOCATIONS OF ALL PIPE AND UTILITY CROSSINGS PRIOR TO CONSTRUCTION.
8. SEWER AND PIPE FITTINGS SHALL BE SDR 26.
9. USE SLURRY BACKFILL AT ALL UTILITY CROSSINGS WHERE CLEARANCE BETWEEN PIPES IS LESS THAN 1 FOOT.

SYMBOL LEGEND

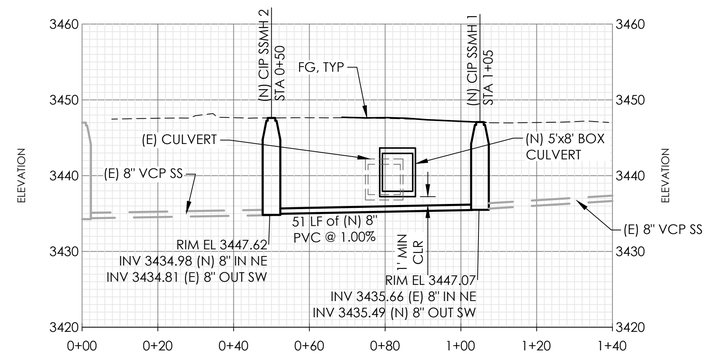
- BOLLARD
- CP# CONTROL POINT
- CULVERT
- E ELECTRICAL PANEL / BOX
- (E) FIRE HYDRANT
- SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- T TELCO BOX
- W WATER METER/BOX

HATCH LEGEND

- (E) CONCRETE
- (N) CONCRETE
- (E) PAVEMENT
- (E) AB ROAD

LINE LEGEND

- (E) EP
- (N) EP
- (E) CONC
- (N) CONC
- PROPERTY LINE
- FLOWLINE
- (E) WATER MAIN
- (N) WATER MAIN
- (E) STORM DRAIN
- (E) SANITARY SEWER
- (N) SANITARY SEWER



NOTE: EXISTING SEWER INVERTS ARE APPROXIMATE AND BASED ON CCTV INFORMATION. CONTRACTOR SHALL POTHOLE TO VERIFY DEPTH AND LOCATION PRIOR TO THE START OF CONSTRUCTION.

SEWER MAIN PROFILE
H: 1"=20'
V: 1"=10'

60% PROGRESS

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS

NO	DATE	DESCRIPTION

PACE ENGINEERING

DES SP	CKD PJR	JOB NO.
DRN DP	DATE 2/9/22	0161.105

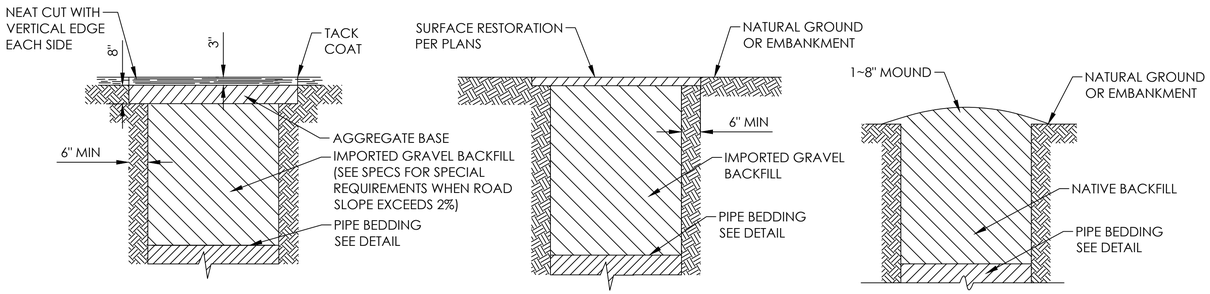
SIGNED

CITY OF WEED
BOLES CREEK STORMWATER IMPROVEMENT PROJECT

UTILITY PLAN

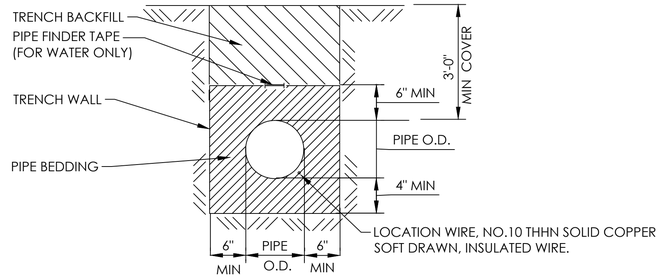
SHEET
C1.3
PG 6 OF 8

Plot Date: February 09, 2022 - 10:48 am Login Name: sporte
File Name: M:\Land Projects\061105 SW Improvement Project\DWG\90% CDs\Utility Plan.dwg, Layout: UTILITY



CLASS "A1" BACKFILL **CLASS "A" BACKFILL** **CLASS "C"**

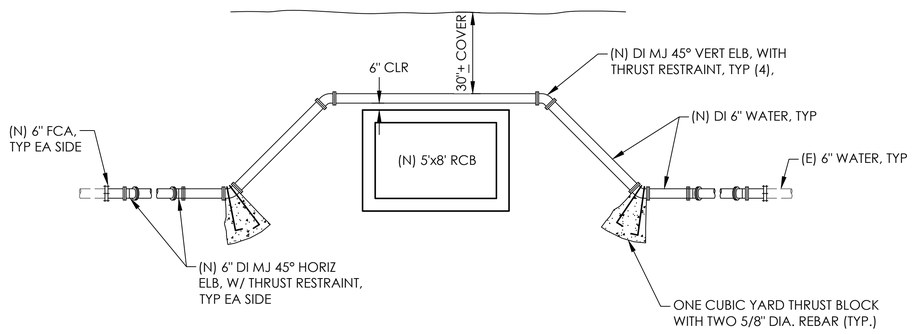
PIPE TRENCH DETAILS — NTS — 1 / C2.0 — C1.3



(FOR WATER PIPING & PRESSURE SEWERS ONLY)

NOTE: FOR 2 PIPES IN COMMON TRENCH, MAINTAIN 12" CLEARANCE BETWEEN PIPES AND 6"MIN BETWEEN PIPES AND TRENCH WALL.

DETAIL PIPE BEDDING — NTS — 2 / C2.0 — C1.3



NOTE: ALL BACK SHALL BE CLASS 'A'

WATER REALIGNMENT — NTS — 3 / C2.0 — C1.3

60% PROGRESS

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS		
NO	DATE	DESCRIPTION

PACE ENGINEERING

DES SP	CKD PR	JOB NO.
DRN DP	DATE 2/9/22	0161.105

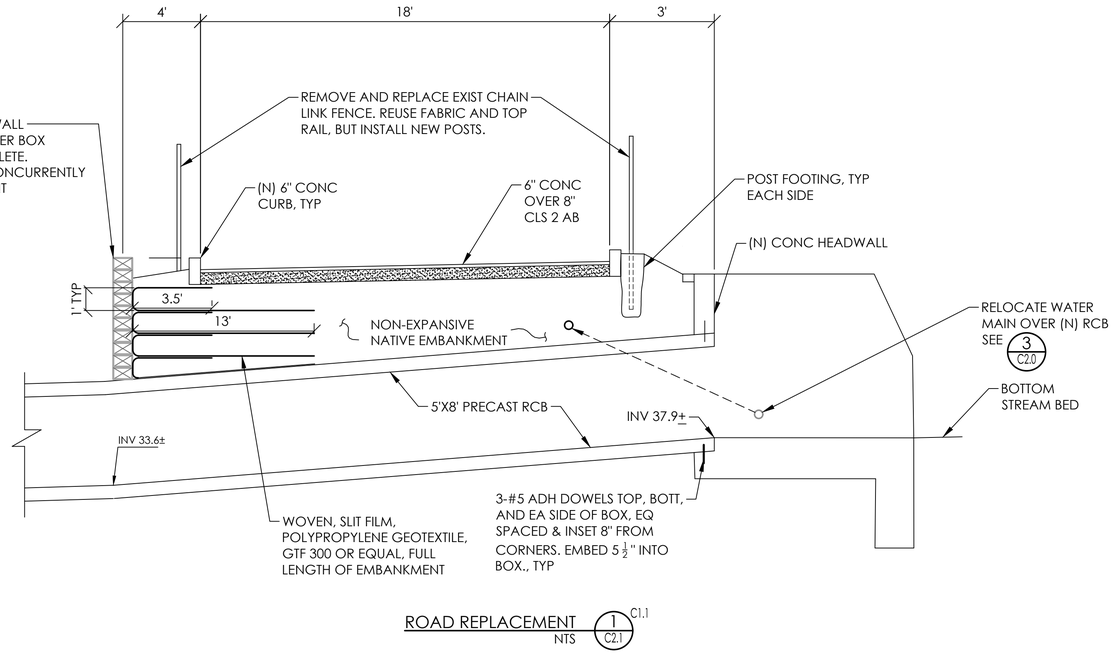
SIGNED

CITY OF WEED
BOLES CREEK STORMWATER IMPROVEMENT PROJECT

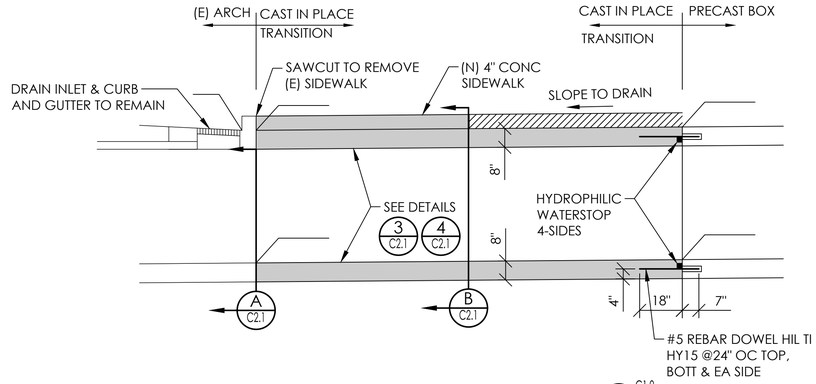
DETAILS 1

SHEET
C2.0
PG 7 OF 8

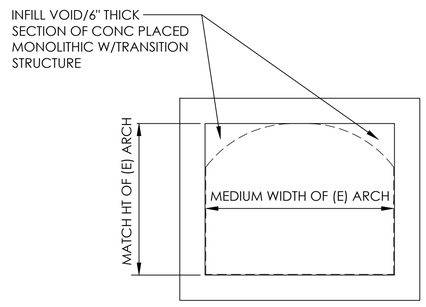
Plot Date: February 09, 2022 - 10:48 am Login Name: spothe
File Name: M:\Land Projects\0161\05 SW Improvement Project\DWG\90% CD\Details 1.dwg Layout: PACE 22x34 SS



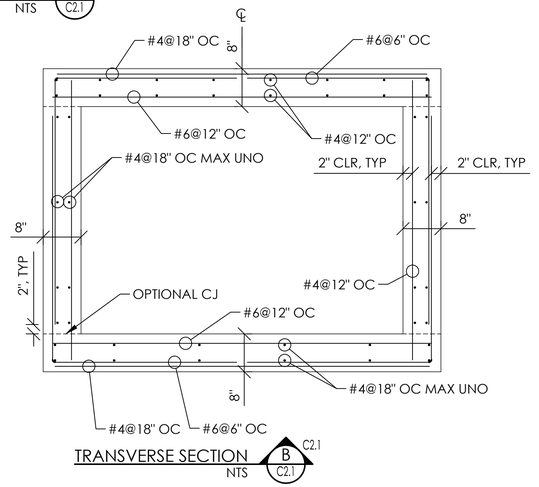
ROAD REPLACEMENT 1 C2.1 C1.1
NTS



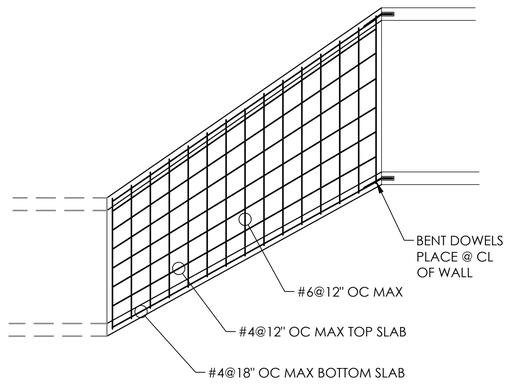
LONGITUDAL SECTION - TRANSITION SECTION 2 C2.1 C1.0
NTS



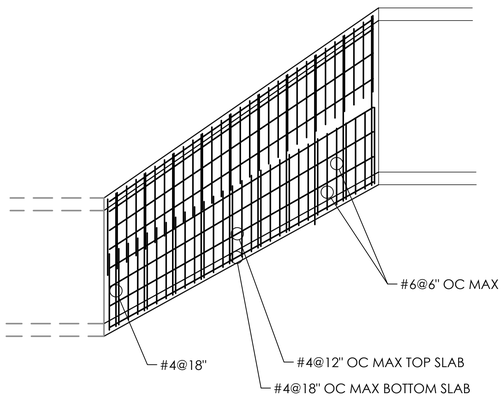
TRANSVERSE SECTION A C2.1
NTS



TRANSVERSE SECTION B C2.1
NTS



TOP/BOTTOM INTERIOR FACE REBAR PLAN 3 C2.1
NTS



TOP/BOTTOM EXTERIOR FACE REBAR PLAN 4 C2.1
NTS

60% PROGRESS

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS		
NO	DATE	DESCRIPTION

PACE ENGINEERING

DES SP	CKD PR	JOB NO.
DRN DP	DATE 2/9/22	0161.105

SIGNED

CITY OF WEED
BOLES CREEK STORMWATER IMPROVEMENT PROJECT

DETAILS 2

SHEET
C2.1
PG 8 OF 8

Plot Date: February 09, 2022 - 10:48 am Login Name: spohle
File Name: M:\Land Projects\0161\05 SW Improvement Project\DWG\90% CD\Details 2.dwg Layout: PACE 22x34 SS

Appendix B

CalEEMod.2020.4.0 Emissions Reports

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

City of Weed Stormwater Improvement Planning Project

Siskiyou County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.09	Acre	0.09	3,920.40	0
Other Non-Asphalt Surfaces	0.66	Acre	0.66	28,749.60	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	85
Climate Zone	14			**Operational Year**	2024
Utility Company	PacifiCorp				
CO2 Intensity (lb/MWhr)	1185.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage is based on project plans and data received from PACE Engineering, Inc. Other Asphalt Surfaces and Non-Asphalt Surfaces includes construction of the new concrete box culvert and replacement of existing utilities within paved areas.

Construction Phase - Construction schedule provided by PACE Engineering and based on project characteristics.

Grading - Grading information provided by PACE Engineering.

Demolition -

Trips and VMT - .

Vehicle Trips -

Construction Off-road Equipment Mitigation - Based on proposed Mitigation Measures.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	30

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstructionPhase	NumDays	100.00	120.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	NumDays	1.00	15.00
tblConstructionPhase	PhaseEndDate	8/4/2023	11/7/2023
tblConstructionPhase	PhaseEndDate	3/14/2023	3/21/2023
tblConstructionPhase	PhaseEndDate	3/17/2023	5/23/2023
tblConstructionPhase	PhaseEndDate	3/15/2023	4/11/2023
tblConstructionPhase	PhaseStartDate	3/18/2023	5/24/2023
tblConstructionPhase	PhaseStartDate	3/16/2023	4/12/2023
tblConstructionPhase	PhaseStartDate	3/15/2023	3/22/2023
tblGrading	AcresOfGrading	22.50	1.20
tblGrading	AcresOfGrading	7.50	0.50
tblGrading	MaterialExported	0.00	400.00
tblGrading	MaterialImported	0.00	300.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	50.00	25.00
tblTripsAndVMT	WorkerTripNumber	14.00	5.00

2.0 Emissions Summary

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0649	0.6463	0.6257	1.1900e-003	0.0784	0.0295	0.1079	0.0398	0.0272	0.0671	0.0000	105.1006	105.1006	0.0292	1.1100e-003	106.1605
Maximum	**0.0649**	**0.6463**	**0.6257**	**1.1900e-003**	**0.0784**	**0.0295**	**0.1079**	**0.0398**	**0.0272**	**0.0671**	**0.0000**	**105.1006**	**105.1006**	**0.0292**	**1.1100e-003**	**106.1605**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0649	0.6463	0.6257	1.1900e-003	0.0379	0.0295	0.0674	0.0187	0.0272	0.0459	0.0000	105.1004	105.1004	0.0292	1.1100e-003	106.1603
Maximum	**0.0649**	**0.6463**	**0.6257**	**1.1900e-003**	**0.0379**	**0.0295**	**0.0674**	**0.0187**	**0.0272**	**0.0459**	**0.0000**	**105.1004**	**105.1004**	**0.0292**	**1.1100e-003**	**106.1603**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**51.70**	**0.00**	**37.58**	**53.11**	**0.00**	**31.54**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2023	5-31-2023	0.2912	0.2912
2	6-1-2023	8-31-2023	0.2411	0.2411
3	9-1-2023	9-30-2023	0.0786	0.0786
		Highest	0.2912	0.2912

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.2500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2500e-003**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.2500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2500e-003**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2023	3/21/2023	5	15	
2	Site Preparation	Site Preparation	3/22/2023	4/11/2023	5	15	
3	Grading	Grading	4/12/2023	5/23/2023	5	30	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	5/24/2023	11/7/2023	5	120	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.2

Acres of Paving: 0.75

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	11.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	25.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	5.00	5.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1800e-003	0.0000	1.1800e-003	1.8000e-004	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8500e-003	0.0433	0.0554	9.0000e-005		2.1200e-003	2.1200e-003		2.0200e-003	2.0200e-003	0.0000	7.8136	7.8136	1.4200e-003	0.0000	7.8492
Total	**4.8500e-003**	**0.0433**	**0.0554**	**9.0000e-005**	**1.1800e-003**	**2.1200e-003**	**3.3000e-003**	**1.8000e-004**	**2.0200e-003**	**2.2000e-003**	**0.0000**	**7.8136**	**7.8136**	**1.4200e-003**	**0.0000**	**7.8492**

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3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	7.3000e-004	1.8000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3067	0.3067	0.0000	5.0000e-005	0.3211
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.3000e-004	3.5100e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8008	0.8008	3.0000e-005	2.0000e-005	0.8089
Total	**4.9000e-004**	**1.0600e-003**	**3.6900e-003**	**1.0000e-005**	**1.0000e-003**	**2.0000e-005**	**1.0200e-003**	**2.7000e-004**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**1.1075**	**1.1075**	**3.0000e-005**	**7.0000e-005**	**1.1300**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8500e-003	0.0433	0.0554	9.0000e-005		2.1200e-003	2.1200e-003		2.0200e-003	2.0200e-003	0.0000	7.8136	7.8136	1.4200e-003	0.0000	7.8492
Total	**4.8500e-003**	**0.0433**	**0.0554**	**9.0000e-005**	**5.3000e-004**	**2.1200e-003**	**2.6500e-003**	**8.0000e-005**	**2.0200e-003**	**2.1000e-003**	**0.0000**	**7.8136**	**7.8136**	**1.4200e-003**	**0.0000**	**7.8492**

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3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	7.3000e-004	1.8000e-004	0.0000	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3067	0.3067	0.0000	5.0000e-005	0.3211
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.3000e-004	3.5100e-003	1.0000e-005	6.7000e-004	1.0000e-005	6.8000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	0.8008	0.8008	3.0000e-005	2.0000e-005	0.8089
Total	**4.9000e-004**	**1.0600e-003**	**3.6900e-003**	**1.0000e-005**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**2.0000e-004**	**2.0000e-005**	**2.2000e-004**	**0.0000**	**1.1075**	**1.1075**	**3.0000e-005**	**7.0000e-005**	**1.1300**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0100e-003	0.0464	0.0294	7.0000e-005		1.7000e-003	1.7000e-003		1.5600e-003	1.5600e-003	0.0000	6.4122	6.4122	2.0700e-003	0.0000	6.4640
Total	**4.0100e-003**	**0.0464**	**0.0294**	**7.0000e-005**	**2.7000e-004**	**1.7000e-003**	**1.9700e-003**	**3.0000e-005**	**1.5600e-003**	**1.5900e-003**	**0.0000**	**6.4122**	**6.4122**	**2.0700e-003**	**0.0000**	**6.4640**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.7000e-004	1.7600e-003	0.0000	4.5000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4004	0.4004	1.0000e-005	1.0000e-005	0.4045
Total	**2.4000e-004**	**1.7000e-004**	**1.7600e-003**	**0.0000**	**4.5000e-004**	**0.0000**	**4.6000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.4004**	**0.4004**	**1.0000e-005**	**1.0000e-005**	**0.4045**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0100e-003	0.0464	0.0294	7.0000e-005		1.7000e-003	1.7000e-003		1.5600e-003	1.5600e-003	0.0000	6.4122	6.4122	2.0700e-003	0.0000	6.4640
Total	**4.0100e-003**	**0.0464**	**0.0294**	**7.0000e-005**	**1.2000e-004**	**1.7000e-003**	**1.8200e-003**	**1.0000e-005**	**1.5600e-003**	**1.5700e-003**	**0.0000**	**6.4122**	**6.4122**	**2.0700e-003**	**0.0000**	**6.4640**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.7000e-004	1.7600e-003	0.0000	3.4000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.4004	0.4004	1.0000e-005	1.0000e-005	0.4045
Total	**2.4000e-004**	**1.7000e-004**	**1.7600e-003**	**0.0000**	**3.4000e-004**	**0.0000**	**3.4000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.4004**	**0.4004**	**1.0000e-005**	**1.0000e-005**	**0.4045**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0684	0.0000	0.0684	0.0373	0.0000	0.0373	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.1527	0.0833	2.1000e-004		6.3000e-003	6.3000e-003		5.8000e-003	5.8000e-003	0.0000	18.5715	18.5715	6.0100e-003	0.0000	18.7217
Total	**0.0140**	**0.1527**	**0.0833**	**2.1000e-004**	**0.0684**	**6.3000e-003**	**0.0747**	**0.0373**	**5.8000e-003**	**0.0431**	**0.0000**	**18.5715**	**18.5715**	**6.0100e-003**	**0.0000**	**18.7217**

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3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.6600e-003	4.1000e-004	1.0000e-005	2.1000e-004	2.0000e-005	2.3000e-004	6.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.6971	0.6971	0.0000	1.1000e-004	0.7298
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	5.3000e-004	5.6200e-003	1.0000e-005	1.4600e-003	1.0000e-005	1.4700e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.2813	1.2813	4.0000e-005	4.0000e-005	1.2943
Total	**8.0000e-004**	**2.1900e-003**	**6.0300e-003**	**2.0000e-005**	**1.6700e-003**	**3.0000e-005**	**1.7000e-003**	**4.5000e-004**	**3.0000e-005**	**4.7000e-004**	**0.0000**	**1.9784**	**1.9784**	**4.0000e-005**	**1.5000e-004**	**2.0241**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0308	0.0000	0.0308	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.1527	0.0833	2.1000e-004		6.3000e-003	6.3000e-003		5.8000e-003	5.8000e-003	0.0000	18.5715	18.5715	6.0100e-003	0.0000	18.7216
Total	**0.0140**	**0.1527**	**0.0833**	**2.1000e-004**	**0.0308**	**6.3000e-003**	**0.0371**	**0.0168**	**5.8000e-003**	**0.0226**	**0.0000**	**18.5715**	**18.5715**	**6.0100e-003**	**0.0000**	**18.7216**

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3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.6600e-003	4.1000e-004	1.0000e-005	1.6000e-004	2.0000e-005	1.8000e-004	5.0000e-005	2.0000e-005	6.0000e-005	0.0000	0.6971	0.6971	0.0000	1.1000e-004	0.7298
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	5.3000e-004	5.6200e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	1.2813	1.2813	4.0000e-005	4.0000e-005	1.2943
Total	**8.0000e-004**	**2.1900e-003**	**6.0300e-003**	**2.0000e-005**	**1.2400e-003**	**3.0000e-005**	**1.2700e-003**	**3.5000e-004**	**3.0000e-005**	**3.6000e-004**	**0.0000**	**1.9784**	**1.9784**	**4.0000e-005**	**1.5000e-004**	**2.0241**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0379	0.3851	0.4258	6.8000e-004		0.0192	0.0192		0.0177	0.0177	0.0000	60.1251	60.1251	0.0195	0.0000	60.6112
Total	**0.0379**	**0.3851**	**0.4258**	**6.8000e-004**		**0.0192**	**0.0192**		**0.0177**	**0.0177**	**0.0000**	**60.1251**	**60.1251**	**0.0195**	**0.0000**	**60.6112**

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7000e-004	0.0140	6.2300e-003	6.0000e-005	1.7600e-003	9.0000e-005	1.8600e-003	5.1000e-004	9.0000e-005	6.0000e-004	0.0000	5.4886	5.4886	3.0000e-005	7.7000e-004	5.7201
Worker	1.9300e-003	1.3300e-003	0.0141	3.0000e-005	3.6400e-003	3.0000e-005	3.6600e-003	9.7000e-004	2.0000e-005	9.9000e-004	0.0000	3.2033	3.2033	1.1000e-004	1.0000e-004	3.2357
Total	**2.6000e-003**	**0.0153**	**0.0203**	**9.0000e-005**	**5.4000e-003**	**1.2000e-004**	**5.5200e-003**	**1.4800e-003**	**1.1000e-004**	**1.5900e-003**	**0.0000**	**8.6919**	**8.6919**	**1.4000e-004**	**8.7000e-004**	**8.9558**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0379	0.3851	0.4258	6.8000e-004		0.0192	0.0192		0.0177	0.0177	0.0000	60.1250	60.1250	0.0195	0.0000	60.6111
Total	**0.0379**	**0.3851**	**0.4258**	**6.8000e-004**		**0.0192**	**0.0192**		**0.0177**	**0.0177**	**0.0000**	**60.1250**	**60.1250**	**0.0195**	**0.0000**	**60.6111**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7000e-004	0.0140	6.2300e-003	6.0000e-005	1.3900e-003	9.0000e-005	1.4900e-003	4.2000e-004	9.0000e-005	5.1000e-004	0.0000	5.4886	5.4886	3.0000e-005	7.7000e-004	5.7201
Worker	1.9300e-003	1.3300e-003	0.0141	3.0000e-005	2.7000e-003	3.0000e-005	2.7200e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	3.2033	3.2033	1.1000e-004	1.0000e-004	3.2357
Total	**2.6000e-003**	**0.0153**	**0.0203**	**9.0000e-005**	**4.0900e-003**	**1.2000e-004**	**4.2100e-003**	**1.1600e-003**	**1.1000e-004**	**1.2700e-003**	**0.0000**	**8.6919**	**8.6919**	**1.4000e-004**	**8.7000e-004**	**8.9558**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.463527	0.065478	0.196538	0.150553	0.048906	0.009644	0.005052	0.023105	0.000601	0.000156	0.030415	0.000868	0.005157
Other Non-Asphalt Surfaces	0.463527	0.065478	0.196538	0.150553	0.048906	0.009644	0.005052	0.023105	0.000601	0.000156	0.030415	0.000868	0.005157

5.0 Energy Detail

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.2500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Unmitigated	3.2500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**3.2500e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**3.2500e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

City of Weed Stormwater Improvement Planning Project

Siskiyou County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.09	Acre	0.09	3,920.40	0
Other Non-Asphalt Surfaces	0.66	Acre	0.66	28,749.60	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	85
Climate Zone	14			**Operational Year**	2024
Utility Company	PacifiCorp				
CO2 Intensity (lb/MWhr)	1185.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage is based on project plans and data received from PACE Engineering, Inc. Other Asphalt Surfaces and Non-Asphalt Surfaces includes construction of the new concrete box culvert and replacement of existing utilities within paved areas.

Construction Phase - Construction schedule provided by PACE Engineering and based on project characteristics.

Grading - Grading information provided by PACE Engineering.

Demolition -

Trips and VMT - .

Vehicle Trips -

Construction Off-road Equipment Mitigation - Based on proposed Mitigation Measures.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	30

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstructionPhase	NumDays	100.00	120.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	NumDays	1.00	15.00
tblConstructionPhase	PhaseEndDate	8/4/2023	11/7/2023
tblConstructionPhase	PhaseEndDate	3/14/2023	3/21/2023
tblConstructionPhase	PhaseEndDate	3/17/2023	5/23/2023
tblConstructionPhase	PhaseEndDate	3/15/2023	4/11/2023
tblConstructionPhase	PhaseStartDate	3/18/2023	5/24/2023
tblConstructionPhase	PhaseStartDate	3/16/2023	4/12/2023
tblConstructionPhase	PhaseStartDate	3/15/2023	3/22/2023
tblGrading	AcresOfGrading	22.50	1.20
tblGrading	AcresOfGrading	7.50	0.50
tblGrading	MaterialExported	0.00	400.00
tblGrading	MaterialImported	0.00	300.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	50.00	25.00
tblTripsAndVMT	WorkerTripNumber	14.00	5.00

2.0 Emissions Summary

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.9854	10.3158	7.8884	0.0155	4.6784	0.4219	5.1003	2.5188	0.3882	2.9070	0.0000	1,513.4348	1,513.4348	0.4445	0.0158	1,527.7207
Maximum	**0.9854**	**10.3158**	**7.8884**	**0.0155**	**4.6784**	**0.4219**	**5.1003**	**2.5188**	**0.3882**	**2.9070**	**0.0000**	**1,513.4348**	**1,513.4348**	**0.4445**	**0.0158**	**1,527.7207**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.9854	10.3158	7.8884	0.0155	2.1396	0.4219	2.5615	1.1432	0.3882	1.5314	0.0000	1,513.4348	1,513.4348	0.4445	0.0158	1,527.7207
Maximum	**0.9854**	**10.3158**	**7.8884**	**0.0155**	**2.1396**	**0.4219**	**2.5615**	**1.1432**	**0.3882**	**1.5314**	**0.0000**	**1,513.4348**	**1,513.4348**	**0.4445**	**0.0158**	**1,527.7207**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.27**	**0.00**	**49.78**	**54.61**	**0.00**	**47.32**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0178	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0178**	**0.0000**	**8.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.0000**	**1.7000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0178	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0178**	**0.0000**	**8.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.0000**	**1.7000e-004**

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2023	3/21/2023	5	15	
2	Site Preparation	Site Preparation	3/22/2023	4/11/2023	5	15	
3	Grading	Grading	4/12/2023	5/23/2023	5	30	
4	Building Construction	Building Construction	5/24/2023	11/7/2023	5	120	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.2

Acres of Paving: 0.75

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	11.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	25.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	5.00	5.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1569	0.0000	0.1569	0.0238	0.0000	0.0238			0.0000			0.0000
Off-Road	0.6463	5.7787	7.3926	0.0120		0.2821	0.2821		0.2698	0.2698		1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.6463**	**5.7787**	**7.3926**	**0.0120**	**0.1569**	**0.2821**	**0.4390**	**0.0238**	**0.2698**	**0.2936**		**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0400e-003	0.0943	0.0239	4.3000e-004	0.0129	9.7000e-004	0.0138	3.5300e-003	9.2000e-004	4.4500e-003		45.0439	45.0439	1.0000e-004	7.0800e-003	47.1561
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0619	0.0373	0.4719	1.1900e-003	0.1277	9.0000e-004	0.1286	0.0339	8.3000e-004	0.0347		121.8466	121.8466	3.6900e-003	3.2600e-003	122.9100
Total	**0.0639**	**0.1315**	**0.4958**	**1.6200e-003**	**0.1406**	**1.8700e-003**	**0.1425**	**0.0374**	**1.7500e-003**	**0.0392**		**166.8905**	**166.8905**	**3.7900e-003**	**0.0103**	**170.0661**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0706	0.0000	0.0706	0.0107	0.0000	0.0107			0.0000			0.0000
Off-Road	0.6463	5.7787	7.3926	0.0120		0.2821	0.2821		0.2698	0.2698	0.0000	1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.6463**	**5.7787**	**7.3926**	**0.0120**	**0.0706**	**0.2821**	**0.3527**	**0.0107**	**0.2698**	**0.2805**	**0.0000**	**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0400e-003	0.0943	0.0239	4.3000e-004	9.9500e-003	9.7000e-004	0.0109	2.8100e-003	9.2000e-004	3.7400e-003		45.0439	45.0439	1.0000e-004	7.0800e-003	47.1561
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0619	0.0373	0.4719	1.1900e-003	0.0944	9.0000e-004	0.0953	0.0257	8.3000e-004	0.0265		121.8466	121.8466	3.6900e-003	3.2600e-003	122.9100
Total	**0.0639**	**0.1315**	**0.4958**	**1.6200e-003**	**0.1044**	**1.8700e-003**	**0.1062**	**0.0285**	**1.7500e-003**	**0.0303**		**166.8905**	**166.8905**	**3.7900e-003**	**0.0103**	**170.0661**

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0354	0.0000	0.0354	3.8200e-003	0.0000	3.8200e-003			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084		942.4317	942.4317	0.3048		950.0517
Total	**0.5348**	**6.1887**	**3.9239**	**9.7300e-003**	**0.0354**	**0.2266**	**0.2619**	**3.8200e-003**	**0.2084**	**0.2123**		**942.4317**	**942.4317**	**0.3048**		**950.0517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0309	0.0186	0.2360	6.0000e-004	0.0639	4.5000e-004	0.0643	0.0169	4.1000e-004	0.0174		60.9233	60.9233	1.8400e-003	1.6300e-003	61.4550
Total	**0.0309**	**0.0186**	**0.2360**	**6.0000e-004**	**0.0639**	**4.5000e-004**	**0.0643**	**0.0169**	**4.1000e-004**	**0.0174**		**60.9233**	**60.9233**	**1.8400e-003**	**1.6300e-003**	**61.4550**

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0159	0.0000	0.0159	1.7200e-003	0.0000	1.7200e-003			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084	0.0000	942.4317	942.4317	0.3048		950.0517
Total	**0.5348**	**6.1887**	**3.9239**	**9.7300e-003**	**0.0159**	**0.2266**	**0.2425**	**1.7200e-003**	**0.2084**	**0.2102**	**0.0000**	**942.4317**	**942.4317**	**0.3048**		**950.0517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0309	0.0186	0.2360	6.0000e-004	0.0472	4.5000e-004	0.0477	0.0129	4.1000e-004	0.0133		60.9233	60.9233	1.8400e-003	1.6300e-003	61.4550
Total	**0.0309**	**0.0186**	**0.2360**	**6.0000e-004**	**0.0472**	**4.5000e-004**	**0.0477**	**0.0129**	**4.1000e-004**	**0.0133**		**60.9233**	**60.9233**	**1.8400e-003**	**1.6300e-003**	**61.4550**

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5616	0.0000	4.5616	2.4877	0.0000	2.4877			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865		1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.9335**	**10.1789**	**5.5516**	**0.0141**	**4.5616**	**0.4201**	**4.9817**	**2.4877**	**0.3865**	**2.8741**		**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3200e-003	0.1071	0.0272	4.8000e-004	0.0146	1.1000e-003	0.0157	4.0100e-003	1.0500e-003	5.0600e-003		51.1863	51.1863	1.1000e-004	8.0500e-003	53.5865
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0495	0.0298	0.3775	9.5000e-004	0.1022	7.2000e-004	0.1029	0.0271	6.6000e-004	0.0278		97.4773	97.4773	2.9500e-003	2.6100e-003	98.3280
Total	**0.0518**	**0.1369**	**0.4047**	**1.4300e-003**	**0.1168**	**1.8200e-003**	**0.1186**	**0.0311**	**1.7100e-003**	**0.0328**		**148.6635**	**148.6635**	**3.0600e-003**	**0.0107**	**151.9145**

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0527	0.0000	2.0527	1.1194	0.0000	1.1194			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865	0.0000	1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.9335**	**10.1789**	**5.5516**	**0.0141**	**2.0527**	**0.4201**	**2.4728**	**1.1194**	**0.3865**	**1.5059**	**0.0000**	**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3200e-003	0.1071	0.0272	4.8000e-004	0.0113	1.1000e-003	0.0124	3.2000e-003	1.0500e-003	4.2500e-003		51.1863	51.1863	1.1000e-004	8.0500e-003	53.5865
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0495	0.0298	0.3775	9.5000e-004	0.0755	7.2000e-004	0.0763	0.0206	6.6000e-004	0.0212		97.4773	97.4773	2.9500e-003	2.6100e-003	98.3280
Total	**0.0518**	**0.1369**	**0.4047**	**1.4300e-003**	**0.0868**	**1.8200e-003**	**0.0887**	**0.0238**	**1.7100e-003**	**0.0255**		**148.6635**	**148.6635**	**3.0600e-003**	**0.0107**	**151.9145**

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.6322**	**6.4186**	**7.0970**	**0.0114**		**0.3203**	**0.3203**		**0.2946**	**0.2946**		**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.2251	0.1012	9.6000e-004	0.0307	1.5700e-003	0.0323	8.8300e-003	1.5100e-003	0.0103		100.7206	100.7206	5.4000e-004	0.0142	104.9618
Worker	0.0309	0.0186	0.2360	6.0000e-004	0.0639	4.5000e-004	0.0643	0.0169	4.1000e-004	0.0174		60.9233	60.9233	1.8400e-003	1.6300e-003	61.4550
Total	**0.0421**	**0.2437**	**0.3372**	**1.5600e-003**	**0.0945**	**2.0200e-003**	**0.0966**	**0.0258**	**1.9200e-003**	**0.0277**		**161.6439**	**161.6439**	**2.3800e-003**	**0.0158**	**166.4168**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.6322**	**6.4186**	**7.0970**	**0.0114**		**0.3203**	**0.3203**		**0.2946**	**0.2946**	**0.0000**	**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.2251	0.1012	9.6000e-004	0.0241	1.5700e-003	0.0257	7.2300e-003	1.5100e-003	8.7300e-003		100.7206	100.7206	5.4000e-004	0.0142	104.9618
Worker	0.0309	0.0186	0.2360	6.0000e-004	0.0472	4.5000e-004	0.0477	0.0129	4.1000e-004	0.0133		60.9233	60.9233	1.8400e-003	1.6300e-003	61.4550
Total	**0.0421**	**0.2437**	**0.3372**	**1.5600e-003**	**0.0713**	**2.0200e-003**	**0.0734**	**0.0201**	**1.9200e-003**	**0.0220**		**161.6439**	**161.6439**	**2.3800e-003**	**0.0158**	**166.4168**

4.0 Operational Detail - Mobile

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.463527	0.065478	0.196538	0.150553	0.048906	0.009644	0.005052	0.023105	0.000601	0.000156	0.030415	0.000868	0.005157

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Other Non-Asphalt Surfaces	0.463527	0.065478	0.196538	0.150553	0.048906	0.009644	0.005052	0.023105	0.000601	0.000156	0.030415	0.000868	0.005157

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

City of Weed Stormwater Improvement Planning Project - Siskiyou County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0178	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Unmitigated	0.0178	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.2200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Total	**0.0178**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6000e-004**	**1.6000e-004**	**0.0000**		**1.7000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.2200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Total	**0.0178**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6000e-004**	**1.6000e-004**	**0.0000**		**1.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C

Biological Records Search Documentation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Yreka Fish And Wildlife Office
1829 South Oregon Street
Yreka, CA 96097-3446
Phone: (530) 842-5763 Fax: (530) 842-4517

In Reply Refer To: March 22, 2023
Project Code: 2023-0058766
Project Name: Boles Creek Storm Water Improvement Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Yreka Fish And Wildlife Office
1829 South Oregon Street
Yreka, CA 96097-3446
(530) 842-5763

PROJECT SUMMARY

Project Code: 2023-0058766

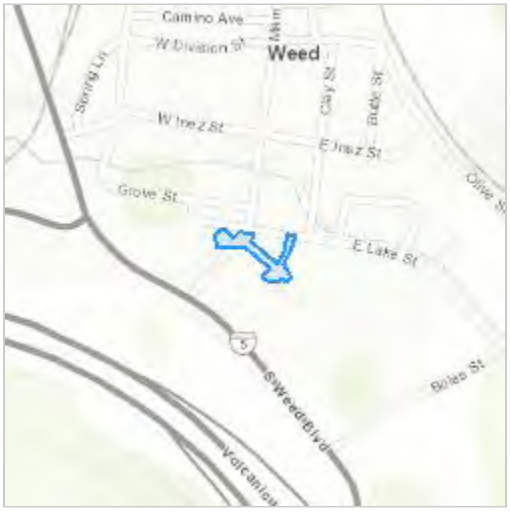
Project Name: Boles Creek Storm Water Improvement Project

Project Type: Flooding

Project Description: The proposed project includes improvements to Boles Creek drainage structures within the City of Weed. Improvements include replacing/ upsizing an undersized concrete channel from Rippon Way to Main Street; constructing a new concrete headwall, approach, and rip-rap side walls; and replacing existing water and sewer utilities within Rippon Way. The purpose of the proposed project is to minimize the potential for flooding and ensure the health and safety of residents living and working in downtown Weed.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.422450350000005,-122.3844576624005,14z



Counties: Siskiyou County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 11 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Gray Wolf *Canis lupus* Population: U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA. Mexico. There is **final** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/4488	Endangered
North American Wolverine *Gulo gulo luscus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Proposed Threatened

BIRDS

NAME	STATUS
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

FISHES

NAME	STATUS
Lost River Sucker *Deltistes luxatus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5604	Endangered
Shortnose Sucker *Chasmistes brevirostris* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7160	Endangered

INSECTS

NAME	STATUS
Franklin's Bumble Bee *Bombus franklini* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7022	Endangered
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRUSTACEANS

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPAC USER CONTACT INFORMATION

Agency: ENPLAN
Name: Kiara Hadsall
Address: 3179 Bechelli Lane
City: Redding
State: CA
Zip: 96002
Email khadsall@enplan.com
Phone: 5302210440

TABLE 1
Rarefind (CNDDB) Report Summary
Boles Creek Storm Water Improvement Project; Five-Mile Radius of Project Area
March 2023

Listed Element	Quadrangle[1]					Status [2]
	ME	WE	HO	CMS	MS	
ANIMALS						
Bald eagle		•				FBCC, FD, SFP, SE
Cascades frog		•				SC, SSSC
Fisher	•					SSSC
Gray-headed pika			•			None
Long-eared myotis					•	None
Lower Klamath marbled sculpin		•				SSSC
North American porcupine		•	•			None
Obscure bumble bee					•	None
Sierra Nevada red fox					•	ST
Silver-haired bat		•			•	None
Siskiyou hesperian		•				None
Wawona riffle beetle		•				None
Western yellow-billed cuckoo		•				FT, SE
PLANTS						
Alkali hymenoxys		•				2B.2
Coast fawn lily		•				2B.2
Henderson's triteleia		•				2B.2
Modoc green-gentian			•			2B.3
Oregon fireweed	•					1B.2
Pallid bird's-beak		•	•	•		1B.2
Peck's lomatium		•				2B.2
Pickering's ivesia		•				1B.2
Rosy orthocarpus			•	•		2B.1
Shasta chaenactis		•				1B.3
Snow fleabane daisy			•			2B.3
Subalpine aster	•					2B.3
Woolly balsamroot	•	•				1B.2

Highlighting denotes the quadrangle in which the project site is located
*Denotes species on the project site

[1]QUADRANGLE CODE

WE	Weed
ME	Mount Eddy
HO	Hotlum
CMS	City of Mount Shasta
MS	Mount Shasta

[2]STATUS CODES

Federal

FE	Federally Listed – Endangered
FT	Federally Listed – Threatened
FC	Federal Candidate Species
FP	Federal Proposed Species
FD	Federally Delisted
FSC	Federal Species of Concern
FBCC	Federal Bird of Conservation Concern

State

SFP	State Fully Protected
SR	State Rare
SE	State Listed – Endangered
ST	State Listed – Threatened
SC	State Candidate Species
SD	State Delisted
SSSC	State Species of Special Concern
WL	Watch List

Rare Plant Rank

1A Plants Presumed Extinct in California

1B Plants Rare, Threatened or Endangered in California and Elsewhere

2 Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere

3 Plants About Which We Need More Information *(A Review List)*
(generally not considered special-status, unless unusual circumstances warrant)

4 Plants of Limited Distribution *(A Watch List)*
(generally not considered special-status, unless unusual circumstances warrant)

Rare Plant Threat Ranks

0.1 Seriously Threatened in California

0.2 Fairly Threatened in California

0.3 Not Very Threatened in California

TABLE 2
California Native Plant Society
Inventory of Rare and Endangered Plants
U.S. Geological Survey's Weed 7.5-minute Quadrangle

Common Name	Scientific Name	CA Rare Plant Rank	Blooming Period	State Listing Status	Federal Listing Status
Alkali hymenoxys	*Hymenoxys lemmonii*	2B.2	(May) June-Aug (Sep)	None	None
California lady's-slipper	*Cypripedium californicum*	4.2	Apr-Aug (Sep)	None	None
Clustered lady's-slipper	*Cypripedium fasciculatum*	4.2	Mar-Aug	None	None
Coast fawn lily	*Erythronium revolutum*	2B.2	Mar-July (Aug)	None	None
Henderson's triteleia	*Triteleia hendersonii*	2B.2	May-July	None	None
Pallid bird's-beak	*Cordylanthus tenuis* ssp. *pallescens*	1B.2	July-Sep	None	None
Peck's lomatium	*Lomatium peckianum*	2B.2	Apr-May (June)	None	None
Pickering's ivesia	*Ivesia pickeringii*	1B.2	June-Aug (Oct)	None	None
Rosy orthocarpus	*Orthocarpus bracteosus*	2B.2	June-Sep	None	None
Rydberg's spring beauty	*Claytonia obovata*	4.3	(Mar-Apr) May-June (July)	None	None
Shasta chaenactis	*Chaenactis suffrutescens*	1B.3	May-Sep	None	None
Subalpine aster	*Eurybia merita*	2B.3	July-Aug	None	None
Tracy's collomia	*Collomia tracyi*	4.3	June-July	None	None
Woolly balsamroot	*Balsamorhiza lanata*	1B.2	Apr-June	None	None

Rare Plant Rank	
1A	Plants Presumed Extinct in California
1B	Plants Rare, Threatened or Endangered in California and Elsewhere
2	Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
3	Plants About Which We Need More Information – A Review List (generally not considered special-status, unless unusual circumstances warrant)
4	Plants of Limited Distribution – A Watch List (generally not considered special-status, unless unusual circumstances warrant)
Rare Plant Threat Rank	
0.1	Seriously Threatened in California
0.2	Fairly Threatened in California
0.3	Not Very Threatened in California

Source: *California Native Plant Society, Rare Plant Program. 2023. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). http://www.rareplants.cnps.org. Accessed March 2023.*

TABLE 3
Potential for Special-Status Species to Occur on the Project Site
Boles Creek Storm Water Improvement Project

March 2023

COMMON NAME	SCIENTIFIC NAME	STATUS [1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
PLANTS							
Alkali hymenoxys	*Hymenoxys lemmonii*	2B.2	Alkali hymenoxys is a perennial herb that occurs in subalkaline soils in Great Basin scrub, lower montane coniferous forest, and meadows and seeps. The species is reported between 800 and 3,300 feet in elevation. The flowering period is June through September.	No	No	No	Suitable habitat for alkali hymenoxys is not present in or adjacent to the project area; therefore, alkali hymenoxys is not expected to be present in the project site.
Coast fawn lily	*Erythronium revolutum*	2B.2	Coast fawn lily, a perennial herb, occurs along streambanks, bogs, and fens in broadleafed upland forests and North Coast coniferous forests. The species is reported between sea level and 5,300 feet in elevation. The flowering period is from March through August.	No	No	No	Suitable habitat for coast fawn lily is not present in or adjacent to the project area; therefore, the coast fawn lily is not expected to be present in the project site.
Henderson's triteleia	*Triteleia hendersonii*	2B.2	Henderson's triteleia, a perennial bulbiferous herb, occurs in cismontane woodland habitats, open slopes, and road banks. The species is reported between 2,500 and 3,900 feet in elevation. The flowering period is May through July.	No	No	No	Suitable habitat for Henderson's triteleia is not present in or adjacent to the project area; therefore, Henderson's triteleia is not expected to be present in the project site.
Modoc green-gentian	*Frasera albicaulis* var. *modocensis*	2B.3	Modoc green-gentian occurs in openings in Great Basin scrub and upper montane coniferous forests. The species is reported between 3,000 and 6,000 feet in elevation. The flowering period is May through July.	No	No	No	Suitable habitat for Modoc green-gentian is not present in or adjacent to the project area; therefore, Modoc green-gentian is not expected to be present in the project site.
Oregon fireweed	*Epilobium rigidum*	1B.2	Oregon fireweed is associated with springs, bogs, fens, and meadows in montane coniferous forest. The species sometimes occurs on serpentine soils. The species is reported between 1,600 and 7,400 feet in elevation. The flowering period is June through September.	No	No	No	Suitable habitat for Oregon fireweed is not present in the project area; therefore, Oregon fireweed is not expected to be present in or adjacent to the project site.

TABLE 3
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Boles Creek Storm Water Improvement Project

March 2023

COMMON NAME	SCIENTIFIC NAME	STATUS [1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Pallid bird's-beak	*Cordylanthus tenuis* ssp. *pallescens*	1B.2	Pallid bird's-beak occurs on open volcanic alluvium within lower montane coniferous forest. The species is reported between 2,200 and 5,400 feet in elevation. The flowering period is July through September.	No	No	No	Suitable habitat for pallid bird's-beak is not present in the project area; therefore, pallid bird's-beak is not expected to be present in or adjacent to the project site.
Peck's lomatium	*Lomatium peckianum*	2B.2	Peck's lomatium occurs on rocky slopes or grassy openings in ponderosa pine-black oak woodland or in juniper woodland. The species is reported between 2,300 and 5,900 feet in elevation. The flowering period is April and May.	No	No	No	Suitable habitat for Peck's lomatium is not present in the project area; therefore, Peck's lomatium is not expected to be present in or adjacent to the project site.
Pickering's ivesia	*Ivesia peckianum*	1B.2	Pickering's ivesia occurs in hanging bogs on serpentine ledges between 2,500 and 4,500 feet above sea level in Siskiyou and Trinity counties. The flowering period is June through October.	No	No	No	Suitable habitat for Pickering's ivesia is not present in the project area; therefore, Pickering's ivesia is not expected to be present in or adjacent to the project site.
Rosy orthocarpus	*Orthocarpus bracteosus*	2B.1	Rosy orthocarpus is an annual herb that occurs in moist meadows. The species is found between 1,640 and 6,562 feet in elevation. The flowering period is June through August.	No	No	No	Suitable habitat for rosy orthocarpus is not present in the project area; therefore, rosy orthocarpus is not expected to be present in or adjacent to the project site.
Shasta chaenactis	*Chaenactis suffrutescens*	1B.3	Shasta chaenactis occurs on rocky open slopes, cobbly river terraces, and along roadcuts. The species is found between 2,400 and 8,800 feet in elevation. The flowering period is May through September.	No	No	No	Suitable habitat for Shasta chaenactis is not present in the project area; therefore, Shasta chaenactis is not expected to be present in or adjacent to the project site.

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Snow fleabane daisy	*Erigeron nivalis*	2B.3	Snow fleabane daisy, a perennial herb, occurs in alpine boulder and rock fields, on rocky volcanic substrates, and in association with meadows and seeps. The species is reported between 5,600 and 9,600 feet in elevation. The flowering period is July and August.	No	No	No	Suitable habitat for snow fleabane daisy is not present in the project area; therefore, snow fleabane daisy is not expected to be present in or adjacent to the project site.
Subalpine aster	*Eurybia merita*	2B.3	Subalpine aster, a perennial herb, occurs on moist soils in upper montane coniferous forest. The species is reported between 4,000 and 6,300 feet in elevation. The flowering period is not described.	No	No	No	Suitable habitat for subalpine aster is not present in the project area; therefore, subalpine aster is not expected to be present in or adjacent to the project site.
Woolly balsamroot	*Balsamorhiza lanata*	1B.2	Woolly balsamroot occurs in open areas and grassy slopes in cismontane woodland in Siskiyou County. The species is reported between 2,600 and 6,300 feet. The flowering period is April through June.	No	No	No	Suitable habitat for woolly balsamroot is not present in the project area; therefore, woolly balsamroot is not expected to be present in or adjacent to the project site.
CRUSTACEANS							
Conservancy fairy shrimp	*Branchinecta conservatio*	FE	Conservancy fairy shrimp inhabit large, cool-water vernal pools with moderately turbid water.	No	No	No	No vernal pools or other potentially suitable habitats for Conservancy fairy shrimp are present in the project site. Conservancy fairy shrimp would thus not be present.
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT	Vernal pool fairy shrimp inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump or basalt-flow depression pools.	No	No	No	No vernal pools or other potentially suitable habitats for vernal pool fairy shrimp are present in the project site. Vernal pool fairy shrimp would thus not be present.

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Boles Creek Storm Water Improvement Project

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Vernal pool tadpole shrimp	*Lepidurus packardi*	FE	Vernal pool tadpole shrimp occur in vernal pools in California's Central Valley and in the surrounding foothills.	No	No	No	No vernal pools or other potentially suitable habitats for vernal pool tadpole shrimp are present in the project site. Vernal pool tadpole shrimp would thus not be present.
BIRDS							
Bald eagle	*Haliaeetus leucocephalus*	FD, FBCC, SE, SFP	Bald eagles nest in large, old-growth trees or snags in mixed stands near open bodies of water. Adults tend to use the same breeding areas year after year and often use the same nest, though a breeding area may include one or more alternate nests. Bald eagles usually do not begin nesting if human disturbance is evident. In California, the bald eagle nesting season is from February through July.	No	No	No	The project site does not contain suitable nesting or foraging habitat for the bald eagle. Therefore, this species is not expected to be present in or adjacent to the project area.
Northern spotted owl	*Strix occidentalis caurina*	FT, ST	Northern spotted owls inhabit dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir forests from sea level to approximately 7,600 feet in elevation. Northern spotted owls typically nest in tree cavities, the broken tops of trees, or in snags. The nesting season is March through June.	No	No	No	The project site does not support suitable nesting or foraging habitat for the northern spotted owl. Therefore, this species is not expected to be present in or adjacent to the project area.
Yellow-billed cuckoo	*Coccyzus americanus*	FT, SE	Western yellow-billed cuckoos inhabit and nest in extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut slow-moving watercourses, backwaters, or seeps. Willows are almost always a dominant component of the vegetation.	No	No	No	No suitable nesting or foraging habitat for the yellow-billed cuckoo is present in the project site or vicinity. Thus, the species is not expected to be present in the project area.

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AMPHIBIANS							
Cascades frog	*Rana cascadae*	SCE, SSSC	In the Klamath Mountains and southern Cascades of Northern California, the Cascades frog is typically found above 5,000 feet in elevation. Cascades frogs inhabit alpine lakes, inlet and outlet streams to mountain lakes, ponds, and meadows.	No	No	No	The project area does not contain suitable alpine lake or pond habitat for the Cascades frog. This species is not expected to be present in or adjacent to the project site.
INSECTS							
Franklin's bumble bee	*Bombus franklini*	FE	Franklin's bumble bee occurs in Douglas, Josephine, and Jackson counties in Oregon, and in Siskiyou and Trinity counties in California. This species inhabits open grassy coastal prairies and Coast Range meadows from 540 feet to above 7800 feet in elevation. Important food plants include *Lupinus, Agastache, Monardella*, and *Vicia*. The flight season is from mid-May to the end of September. The nesting biology of this species is unknown, but it probably nests in abandoned rodent burrows. Very little is known about overwintering sites utilized by the species. Generally, bumble bees overwinter in soft, disturbed soil, or under leaf litter or other debris.	No	No	No	The project area does not contain suitable grassy prairie habitat for Franklin's bumble bee, nor does it contain significant floral resources. Therefore, Franklin's bumble bee is not expected to be present in or adjacent to the project site.

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Monarch butterfly	*Danaus plexippus* pop. 1	FC	The western population of monarch butterflies overwinters on the California Coast, Baja California, and to some extent the central Mexico mountains. The butterflies leave their winter habitats in February and March, and reach the northern limits of their range in California, Oregon, Washington, Idaho, and Nevada, in early to mid-June. Eggs are laid singly on milkweed plants within their breeding range. Once hatched, larva reach the adult stage in 20 to 35 days; most adults live 2 to 5 weeks. Several generations can be produced within one season, with the last generation beginning migration to their overwintering range in August and September, where they live between 6 and 9 months before migrating north.	No	No	No	Monarch butterflies rely on milkweed plants for reproduction, and on various flowering species for nectar as adults. Neither milkweed nor an abundance of flowering plants are present in the project area. Further, the monarch butterfly was not observed during botanical surveys of the project area. Since suitable breeding and foraging habitats are not present in the project area, the monarch butterfly is not expected to utilize the project site.
FISH							
Southern Oregon/ Northern California coho salmon ESU	*Oncorhynchus kisutch* pop. 2	FT, ST	In California, coho salmon are found in many of the short, coastal drainages from the Oregon border south to Monterey Bay. In the larger coastal drainages, coho salmon are found primarily in the lower sections. Spawning migrations begin after heavy, late autumn or winter rains, which encourage the returning adults to leave the ocean and move upstream. Spawning occurs in gravel/pebble substrate in cold, well-oxygenated water.	No	No	No	Although Boles Creek in the project area is tributary to the Klamath River, which is known to contain coho salmon, Dwinnell Dam at Lake Shastina acts as a barrier to anadromous fish species migrating upstream. Therefore, coho salmon are not present in the reach of Boles Creek within the project site.

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March 2023

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Lower Klamath marbled sculpin	*Cottus klamathensis polyporus*	SSSC	Lower Klamath marbled sculpin are common in the Klamath River drainage from Iron Gate Dam downstream to the mouth of the Trinity River. The habitat requirements of this species are not well documented, but the fish seem to occur in a wide variety of habitats and are often found in areas with coarse substrates where water velocities range from slow to swift and in streams with widths greater than 20 meters. Spawning occurs between late February and March.	No	No	No	Lower Klamath marbled sculpin in the Klamath River from Iron Gate Dam to its convergence with the Trinity River. Boles Creek in the study area is outside of the known distribution of this species; therefore, the Lower Klamath marbled sculpin is not present in the project area.
Lost River sucker	*Deltistes luxatus*	FE, SE	The Lost River sucker is native to the Lost River and Upper Klamath River, and are adapted to lakes within these watersheds. In lakes and reservoirs, adult suckers prefer shallow water with vegetation. Spawning occurs from late February to early May. Lake populations spawn in tributary streams, or around springs near the shoreline. River populations spawn in riffles or runs with gravel or cobble substrate, moderate flow, and at depths less than four feet.	No	No	No	The Lost River sucker is distributed within the Upper Klamath Lake and its tributaries, Lost River, Clear Lake, and Tule Lake. Boles Creek in the study area is outside the known distribution of this species; therefore, the Lost River sucker is not present in the study area.
Shortnose sucker	*Chasmistes brevirostris*	FE, SE	The shortnose sucker is known to inhabit Upper Klamath Lake and its tributaries, the Lost River, Clear Lake, Gerber Reservoir, the Tule Lake sump, and the Klamath River upstream of Keno. Spawning occurs from early April to early May. Lake populations spawn in tributary streams, or around springs near the shoreline. River populations spawn in riffles or runs with gravel or cobble substrate, moderate flow, and at depths less than four feet.	No	No	No	The shortnose sucker is distributed in the Upper Klamath and Clear Lakes. They can also be found in large tributaries to these lakes. Boles Creek in the project area is outside the known range of this species; therefore, the shortnose sucker is not present in the project area.

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MAMMALS							
Gray wolf	*Canis lupus*	FE, SE	Gray wolves are habitat generalists and populations can be found in any type of habitat in the Northern Hemisphere from about 20° latitude to the polar ice pack. Key components of preferred wolf habitat include a year-round abundance of natural prey, secluded denning and rendezvous sites, and sufficient space with minimal human disturbance. Dens may be a hollow log or a tunnel excavated in loose soil. A den may have two or more entrances, which are usually indicated by a large pile of dirt. Den sites are often near water, and are usually elevated to detect approaching enemies. Wolf packs establish and defend territories that may range from 20 to 400 square miles. Wolves travel over large areas to hunt, and may cover as much as 30 miles in a day. Young wolves may disperse several hundred miles to seek out a mate or to establish their own pack.	No	No	No	The project site location is within the downtown area of Weed. Suitable habitat does not exist in or adjacent to the project area for the gray wolf. Therefore, this species is not expected to be present on the project site or vicinity.
Fisher – Northern California/Southern Oregon DPS	*Pekania pennanti*	SSSC	Fishers inhabit mixed conifer forests dominated by Douglas-fir, and are also encountered frequently in higher elevation fir and pine forests, and in mixed evergreen/broadleaf forests. Suitable habitat for fishers consists of large areas of mature, dense forest stands with snags and greater than 50 percent canopy closure. Fishers den in cavities in large trees, snags, logs, rocky areas, or shelters provided by slash or brush piles. Fishers are very sensitive to human activities. Den sites are most often found in areas with no human disturbance.	No	No	No	The project area does not contain suitable habitat for the fisher; therefore, this species is not expected to be present in or adjacent to the study area.

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Sierra Nevada red fox	*Vulpes vulpes necator*	ST	The Sierra Nevada red fox inhabits remote mountainous areas where encounters with humans are rare. Preferred habitat appears to be red fir and lodgepole pine forests in the subalpine and alpine zones of the Sierra Nevada. This species may hunt in forest openings, meadows, and barren rocky areas associated with its high elevation habitats.	No	No	No	The project area does not contain suitable habitat for the Sierra Nevada red fox; therefore, this species is not expected to be present in or adjacent to the study area.

[1] **Status Codes**

Federal:

FE	Federally Listed – Endangered
FT	Federally Listed – Threatened
FC	Federal Candidate Species
FP	Federal Proposed Species
FD	Federal Delisted
FBCC	Federal Bird of Conservation Concern

State:

SFP	State Fully Protected
SR	State Rare
SE	State Listed - Endangered
ST	State Listed - Threatened
SC	State Candidate Species
SCE	State Candidate Endangered
SSSC	State Species of Special Concern
WL	Watch List

Rare Plant Rank

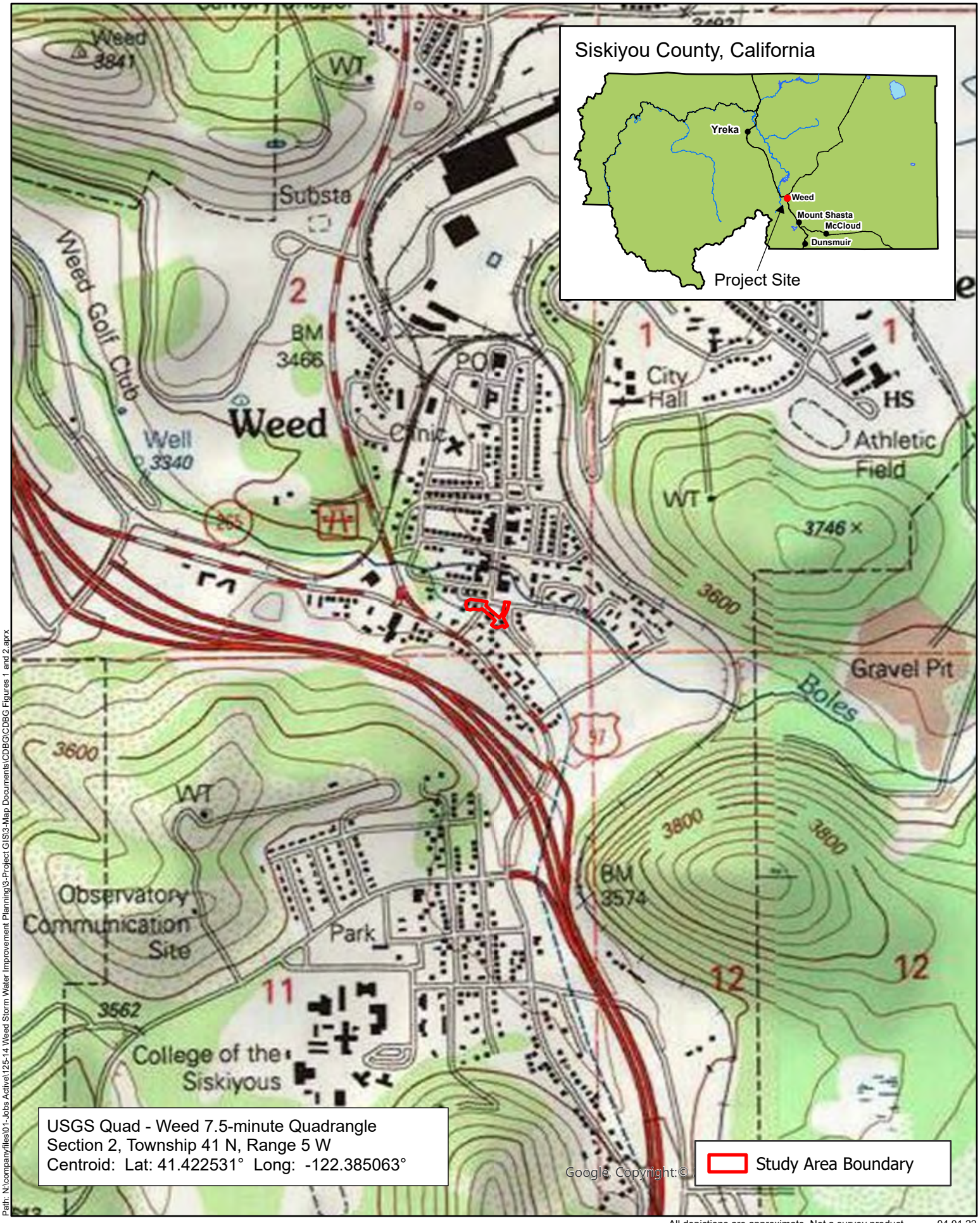
1A	Plants Presumed Extinct in California
1B	Plants Rare, Threatened or Endangered in California and Elsewhere
2A	Presumed Extirpated in California, but More Common Elsewhere
2B	Rare or Endangered in California, but More Common Elsewhere

Rare Plant Threat Rank

0.1	Seriously Threatened in California
0.2	Fairly Threatened in California
0.3	Not Very Threatened in California

Appendix D

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



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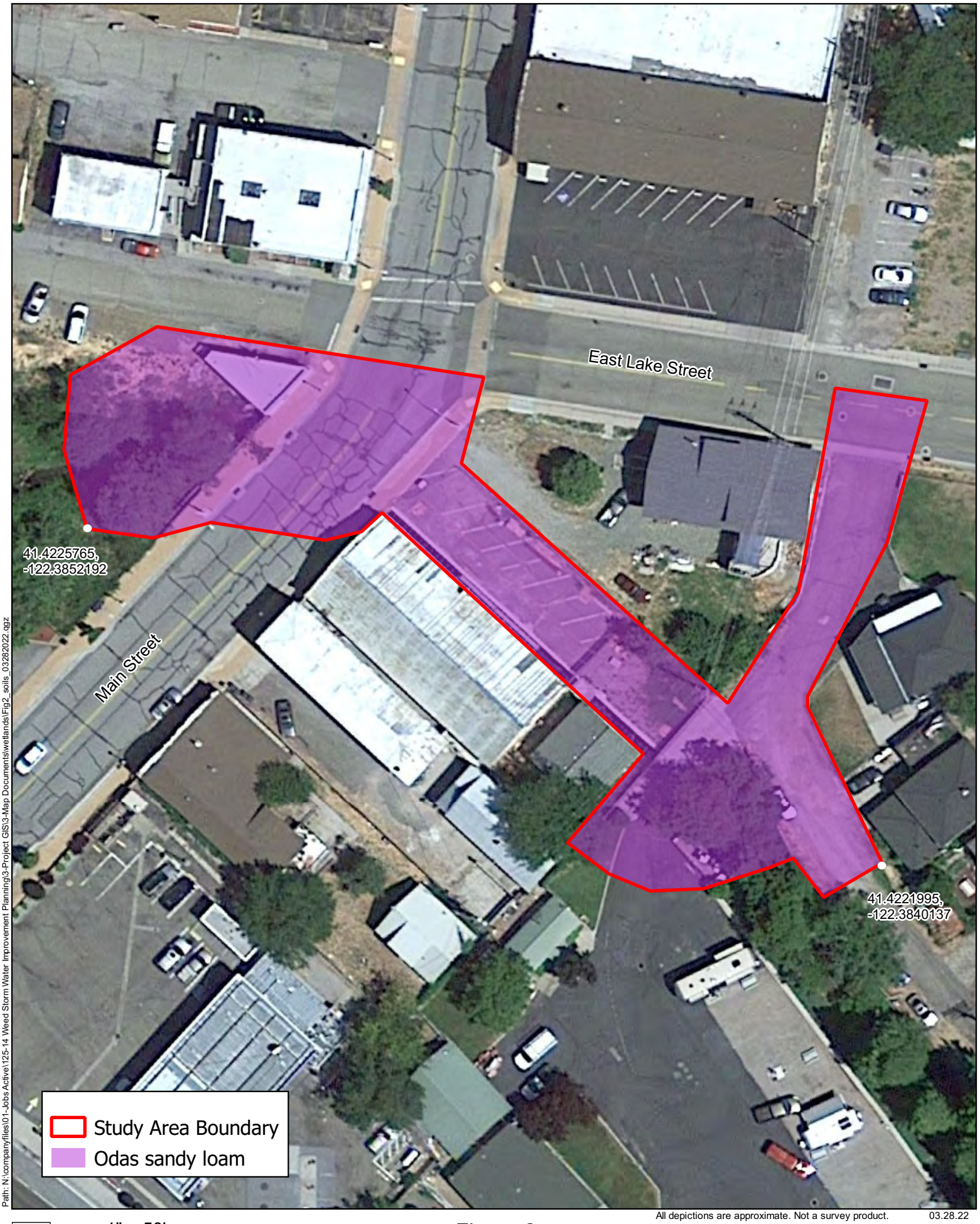
All depictions are approximate. Not a survey product. 04.01.22

0 1,000 Feet

Figure 1

Project Vicinity Map

ENPLAN



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All depictions are approximate. Not a survey product. 03.28.22

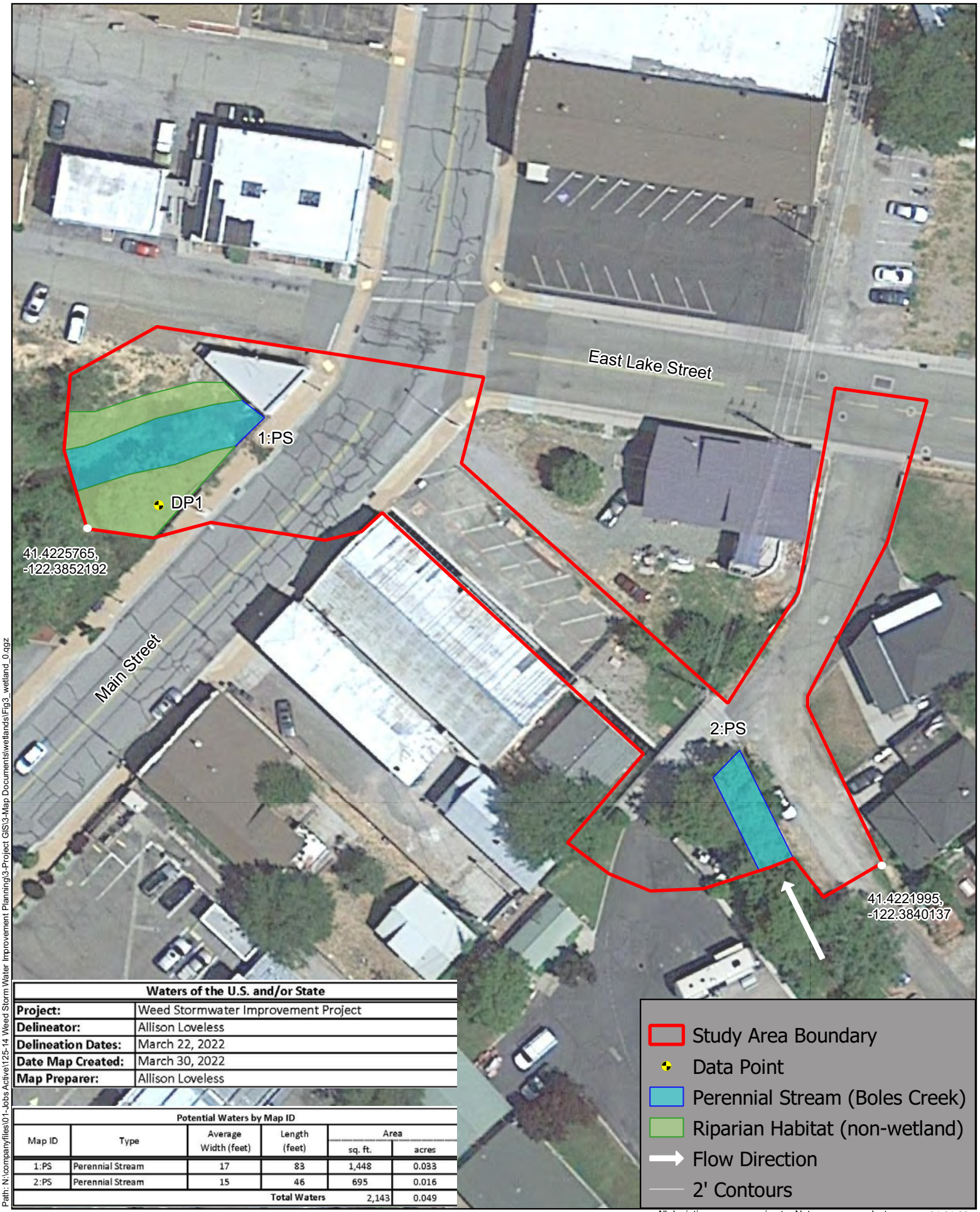
1" = 50'

0 25 50 Feet

Figure 2

Project Soils

ENPLAN



Waters of the U.S. and/or State	
Project:	Weed Stormwater Improvement Project
Delineator:	Allison Loveless
Delineation Dates:	March 22, 2022
Date Map Created:	March 30, 2022
Map Preparer:	Allison Loveless

Potential Waters by Map ID

Map ID	Type	Average Width (feet)	Length (feet)	Area	
				sq. ft.	acres
1:PS	Perennial Stream	17	83	1,448	0.033
2:PS	Perennial Stream	15	46	695	0.016
			Total Waters	2,143	0.049

1" = 50'

0 25 50 Feet

Figure 3

Aquatic Resources Delineation Results

All depictions are approximate. Not a survey product.
This delineation is considered preliminary until approved by the U.S. Army Corps of Engineers.

04.21.22

ENPLAN

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