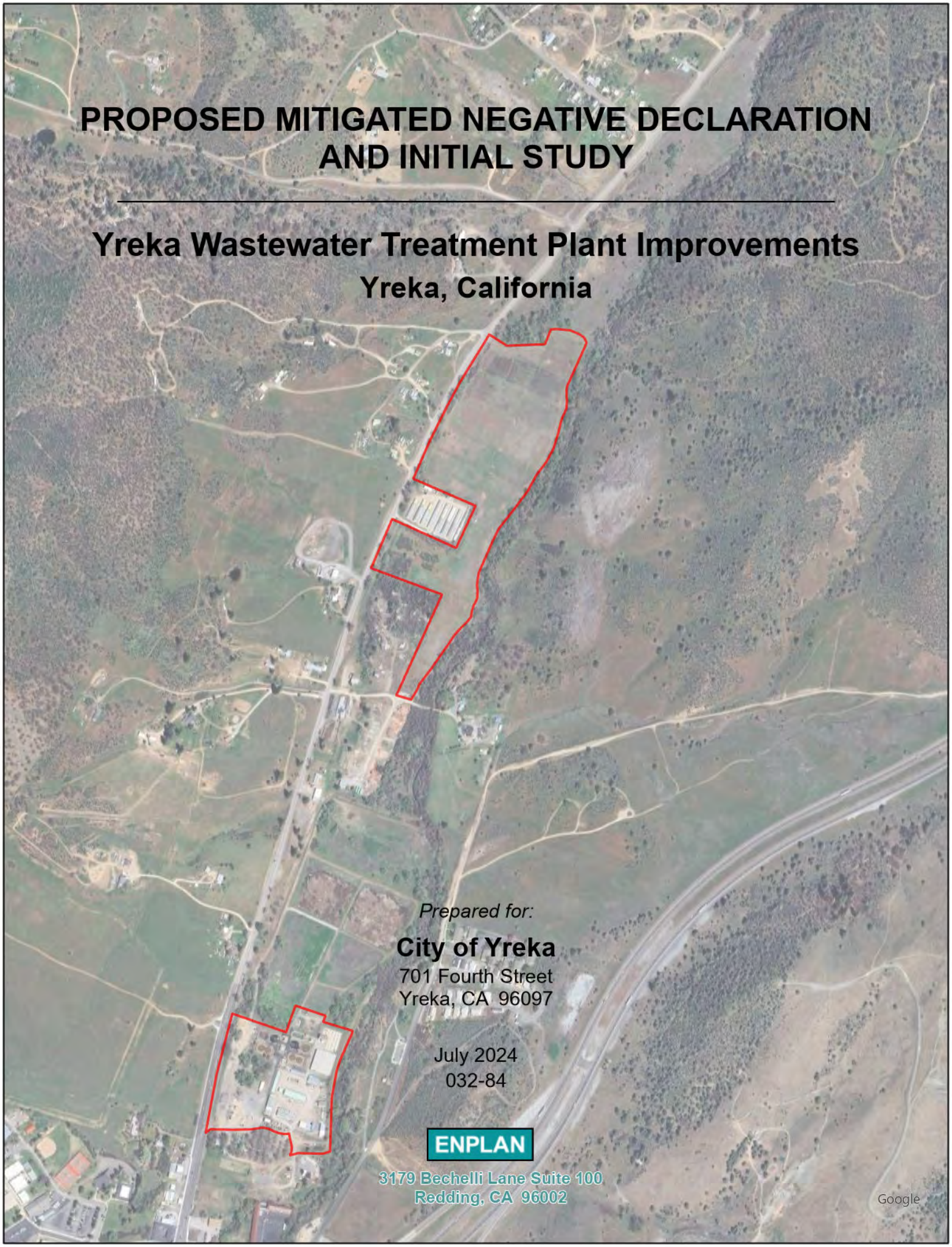
PROPOSED MITIGATED NEGATIVE DECLARATION AND INITIAL STUDY

Yreka Wastewater Treatment Plant Improvements

Yreka, California



Prepared for:

City of Yreka
701 Fourth Street
Yreka, CA 96097

July 2024
032-84

ENPLAN
3179 Bechelli Lane Suite 100
Redding, CA 96002

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PROPOSED MITIGATED NEGATIVE DECLARATION

LEAD AGENCY AND PROJECT PROPONENTS:	City of Yreka
PROJECT NAME:	**Wastewater Treatment Plant Improvement Project**
PROJECT SUMMARY:	The project entails improvements to the City of Yreka's Wastewater Treatment Plant (WWTP), wastewater disposal fields, and Lift Stations (LS) 1, 2, 3, and 4. Improvements at the WWTP include upgrades to the headworks; replacement of surface aerators and diffusers; improvements to the secondary clarifiers; electrical improvements; installation of a fiber optic line from the corporation yard to the control building; expansion and renovation of the control building; demolition of the chlorine contact basin, filtration facility, and SOMAT facility; construction of a new disinfection facility and a new filtration building; installation of a sludge dewatering facility; replacement of the lift station; and installation of supervisory control and data acquisition (SCADA) equipment. Improvements in the disposal fields include replacement of the control building, moisture sensors, solenoid control valves, and concrete valve boxes, installation of new electrical conduit and pull boxes, and installation of a roof-mounted antenna on the new control building. At the lift stations, antennas on ground-mounted poles, cables, and radios would be installed, and minor modifications would be made to the existing control panels to support the SCADA system. Proposed improvements are detailed in Section 3.2 (Project Components/ Physical Improvements) of the Initial Study.
LOCATION:	The WWTP and disposal fields are located generally east of State Route (SR) 263 (North Main Street), west of Yreka Creek, and north of SR 3 (Montague Road) (see **Figures 1 and 2** of the Initial Study). LS 1 is located northwest of the intersection of Helweg Court and SR 3; LS 2 is located north of SR 3, east of Quarry Court; LS 3 is located on the east side of North Phillipe Lane, ~0.3 miles north of SR 3; and LS 4 is located on the west side of South Phillipe Lane, ~0.3 miles south of SR 3 (see **Figures 3 and 4** in the Initial Study).

Findings / Determination

As discussed in the Initial Study, the proposed project could potentially result in impacts on special-status wildlife species, disturbance of nesting birds (if present), impacts to sensitive natural communities, the introduction and spread of noxious weeds during construction, impacts to cultural resources and tribal cultural resources (if present), impacts related to geologic/soils conditions, impacts to paleontological resources (if present), temporarily increased risk of exposure to contaminated materials (if present), temporarily increased air emissions, and temporarily increased noise and vibration levels.

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

Final Mitigated Negative Declaration approved by the City of Yreka on _____, 2024 by Resolution _____.

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INITIAL STUDY

WASTEWATER TREATMENT PLANT IMPROVEMENT PROJECT

CITY OF YREKA

SISKIYOU COUNTY, CALIFORNIA

LEAD AGENCY:

City of Yreka
701 Fourth Street
Yreka, CA 96097

PREPARED BY:

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

July 2024

Initial Study Table of Contents

TABLES

APPENDICES

SECTION 1.0 INTRODUCTION

1.1 PROJECT SUMMARY

Project Title:	**City of Yreka Wastewater Treatment Plant Improvement Project**
Lead Agency Name and Address:	**City of Yreka** 701 Fourth Street Yreka, CA 96097
Contact Person:	**Matthew Bray, Public Works Director** 530.841.2319 mbray@ci.yreka.ca.us
City's Environmental Consultant:	**ENPLAN** 3179 Bechelli Lane, Suite 100 Redding, CA 96002 530.221.0440

The proposed project includes improvements to the City of Yreka's (City) existing Wastewater Treatment Plant (WWTP), disposal fields, and four lift stations (LS). Improvements include replacing existing infrastructure and facilities and constructing/installing new infrastructure and facilities as detailed in Section 3.2 (Project Components/Physical Improvements) of this Initial Study.

1.2 PURPOSE OF STUDY

The City of Yreka, 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 Wastewater Treatment Plant Improvement Project (project). This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified in California Public Resources Code §21000 *et seq*., and the State CEQA Guidelines (California 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 intends to apply for funding through the State Water Resources Control Board (SWRCB) Clean Water State Revolving Fund (CWSRF) Program, partially funded by the U.S. Environmental Protection Agency (USEPA). In accordance with the Operating Agreement between the SWRCB and USEPA, and the State Environmental Review Process, this Initial Study has been prepared to address certain federal environmental regulations (federal cross-cutters), including regulations guiding the General Conformity Rule for the federal Clean Air Act (CAA), the federal Endangered Species Act (FESA), and the National Historic Preservation Act (NHPA). These requirements are addressed in Section 4.4 (Air Quality), Section 4.5 (Biological Resources), and Section 4.6 (Cultural Resources) of this Initial Study**.**

1.3 EVALUATION TERMINOLOGY

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

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

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

1.4 ORGANIZATION OF THE INITIAL STUDY

This document is organized into the following sections:

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

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

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

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

Section 5.0: **List of Preparers**

Section 6.0: **Abbreviations and Acronyms**

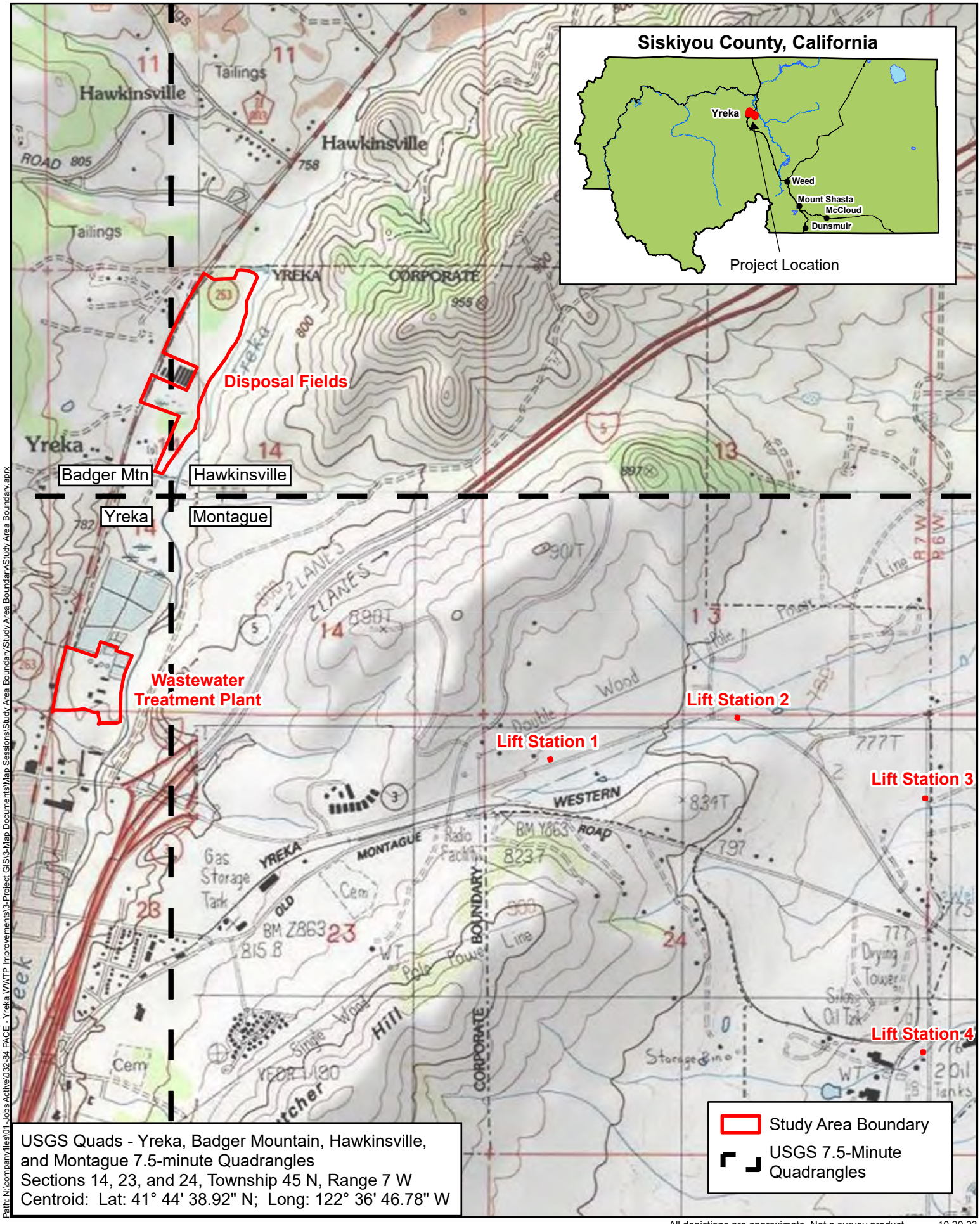
Appendices: Contains information to supplement Section 4.0.

1.5 PROJECT LOCATION

As shown in **Figure 1** (Project Location and Vicinity) and **Figure 2** (WWTP and Disposal Fields Study Area Boundary), the WWTP and disposal fields are located generally east of State Route (SR) 263 (North Main Street), west of Yreka Creek, and north of SR 3 (Montague Road) in Sections 14 and 23, Township 45 North, Range 7 West, of the U.S. Geological Survey's (USGS) Yreka, Badger Mountain, and Hawkinsville 7.5-minute quadrangles.

All four of the LS sites are located in Section 24, Township 45 North, Range 7 West, of the USGS Montague 7.5-minute quadrangle. As shown in **Figure 3**, (Lift Stations 1 and 2), LS 1 is located northwest of the intersection of Helweg Court and SR 3; LS 2 is located north of SR 3, ~370 feet east of Quarry Court. As shown in **Figure 4** (Lift Stations 3 and 4), LS 3 is located on the east side of North Phillipe Lane, ~0.3 miles north of SR 3. LS 4 is located on the west side of South Phillipe Lane, ~0.3 miles south of SR 3. Latitude 41˚44'38.51; Longitude 122 ˚37'50.90"

Staging of construction equipment and materials would occur at the City's Corporation Yard, located immediately south of the WWTP.



USGS Quads - Yreka, Badger Mountain, Hawkinsville, and Montague 7.5-minute Quadrangles
Sections 14, 23, and 24, Township 45 N, Range 7 W
Centroid: Lat: 41° 44' 38.92" N; Long: 122° 36' 46.78" W

All depictions are approximate. Not a survey product. 10.20.23

0 2,000 Feet

Figure 1

Project Location and Vicinity

ENPLAN

Path: N:\companyfiles\01-Jobs Active\032-84 PACE - Yreka WWTP Improvements\3-Project GIS\3-Map Documents\Map Sessions\Study Area Boundary\Study Area Boundary.aprx

Path: N:\companyfiles\01-Jobs Active\032-84 PACE - Yreka WWTP Improvements\3-Project GIS\3-Map Documents\Map Sessions\Study Area Boundary\Study Area Boundary.aprx

All depictions are approximate. Not a survey product. 10.20.23

0 650 Feet

Figure 2

Study Area Boundary

ENPLAN

Path: N:\companyfiles\01-Jobs Active\032-84 PACE - Yreka WWTP Improvements\3-Project GIS\3-Map Documents\Map Sessions\Study Area Boundary\Study Area Boundary.aprx

All depictions are approximate. Not a survey product. 10.20.23

0 250 Feet

Figure 3

Lift Stations 1 and 2

ENPLAN

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All depictions are approximate. Not a survey product. 10.20.23

0 350 Feet

Figure 4

Lift Stations 3 and 4

ENPLAN

1.6 ENVIRONMENTAL SETTING

General Plan Designation:	**WWTP:** Open Space (O) **Disposal Fields:** O **Lift Stations:** Located in public utility easements adjacent to road rights-of-way (ROWs).
Zoning:	**WWTP:** Recreation, School, Conservation, and Open Space (RSC) **Disposal Fields:** RSC **Lift Stations:** Located in public utility easements adjacent to road ROWs.
Surrounding Land Uses:	Yreka Creek and open space border the WWTP and disposal field study areas to the east; SR 263 borders the WWTP and disposal field study areas to the west. Low-density single-family residences are located west of the WWTP and disposal field study areas along SR 263. Multi-family residences are located east of the WWTP along Deer Creek Way. The WWTP and disposal field study area boundaries are separated by wastewater treatment ponds and commercial uses. LS 1, 2, and 3 are surrounded by low-density single-family residences and undeveloped land. Industrial uses surround LS 4.
Topography/Elevation:	The WWTP is located in a level area at an elevation of ~2,560 feet above sea level. The elevation of the disposal fields averages ~2,530.
Natural Communities:	Habitat types in the study area include urban, perennial grassland, and montane riparian. The primary habitat in the study area is urban and consists of paved roads, driveways, and developed areas on the WWTP and lift station sites. Perennial grassland habitat is present in the wastewater disposal fields. The grassland community was planted and is maintained to facilitate wastewater disposal. The montane riparian habitat is present immediately east of the disposal fields along Yreka Creek and in small patches at the WWTP. A detailed discussion of natural communities in the study area is included in Section 4.4 (Biological Resources).
Climate	The climate in the project area is considered Mediterranean with cool, moist winters and warm, dry summers. The average annual rainfall is ~18.5 inches. Temperatures range between an average January low of 24 degrees Fahrenheit (°F) and an average July high of 91 °F.

1.7 PERMITS AND APPROVALS

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

City of Yreka

- 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.

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

- Coverage under the National Pollutant Discharge Elimination System (NPDES) permit for *Discharges of Storm Water Runoff Associated with Construction Activity* (currently Order WQ 2022-0057-DWQ, NPDES No. CAS000002). The permitting process requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must include Best Management Practices (BMPs) to reduce pollutants and any additional controls necessary to meet water quality standards.
- If construction dewatering activities result in the direct discharge of relatively pollutant-free wastewater to surface water, coverage under NCRWQCB General Order R1-2020-0006 (NPDES No. CAG024902) *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 BMPs for construction dewatering activities.
- Construction dewatering activities that are contained on land and do not enter surface water are authorized under SWRCB Water Quality Order No. 2003-003-DWQ, provided that the dewatering discharge is of a quality as good as or better than the underlying groundwater, and there is a low risk of nuisance.

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

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

1.8 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."* In order to determine whether a project may have such an effect, a lead agency is required to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if the tribe requested to the lead agency, in writing, to be informed of proposed projects in the area, and the tribe responds, in writing, within 30 days of receipt of the formal notification and requests consultation. As of December 1, 2023, no Native American tribes have requested formal consultation with the City.

As discussed in Section 4.5, ENPLAN contacted Native American tribes that were identified by the Native American Heritage Commission (NAHC) on July 26, 2023, with a request to provide comments on the proposed project. Follow-up e-mails and telephone calls were placed on November 7 and 13, 2023, to the tribal members that were previously identified by the NAHC. The Modoc Tribe of Oklahoma responded that they have no concerns with the proposed project. No comments were received from any of the other tribes that were contacted.

1.9 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the proposed project, involving at least one impact requiring mitigation to bring it to a less-than-significant level. 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
☐ Agriculture/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	☐ Wildfires
☒ Geology and Soils	☐ Population and Housing	☒ Mandatory Findings of Significance

1.10 PROPOSED MITIGATION MEASURES

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

AIR QUALITY

MM 4.3.1 The following measures shall be implemented to reduce short-term air quality impacts during construction:

a. All material excavated, stockpiled, or graded shall be 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 as needed, preferably twice daily in the mid-morning and after work is completed each day, with care given to work areas with bare soil,

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

c. All on-site vehicles shall be limited to a speed of 15 miles per hour on unpaved roads.

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

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

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

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

h. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications.

MM 4.3.2 Prior to demolition and expansion of structures at the WWTP, a comprehensive survey shall be completed in locations where asbestos and lead-based paint are suspected. Removal, handling, and disposal of material containing asbestos or lead-based paint must be conducted in accordance with National Emission Standard for Hazardous Air Pollutants (NESHAP), California Occupational Health and Safety Administration (Cal/OSHA), and other applicable federal, State, and local regulations.

MM 4.3.3 In the event that previously undetected asbestos or lead-containing materials are discovered during construction, activities that may affect the materials shall cease until results of additional surveys are reviewed. Alternatively, the City of Yreka can assume that the materials are hazardous. Any identified hazardous materials shall be disposed of in accordance with applicable hazardous waste regulations.

BIOLOGICAL RESOURCES

MM 4.4.1 The monarch butterfly is currently designated as a candidate species for federal listing under the Federal Endangered Species Act. If the western migratory population of the monarch butterfly remains a candidate or is formally designated as proposed, threatened, or endangered at the time of construction, the following measures shall be implemented as applicable:

a. A field survey shall be undertaken in early to mid-May (prior to arrival of the butterflies) to determine if milkweeds (*Asclepias* spp.) are present in or adjacent to the work area. If no milkweeds are present, no further action is required.

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

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

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

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

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

MM 4.4.2 In order to avoid impacts to nesting birds and raptors protected under the federal Migratory Bird Treaty Act (MBTA) 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 account for acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds. At a minimum, the survey report shall include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed in the area, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.).

   The results of the survey shall be submitted to the California Department of Fish and Wildlife (CDFW) upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

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

MM 4.4.3 Potential impacts to montane riparian habitat in the project site shall be avoided by installing high-visibility markers along the outer edges of the construction zone adjacent to montane riparian habitat at the wastewater treatment plant site. The high-visibility markers shall consist of marking whiskers, pin flags, stakes with flagging tape, or similar markers; marker locations shall be determined by a qualified biologist in consultation with the project engineer and the City of Yreka. No construction activities (e.g., clearing, grading, trenching, etc.), including vehicle parking and materials stockpiling, shall occur within the marked area. The exclusionary markers shall be periodically inspected during the construction period to ensure the markers are properly maintained. The markers shall be removed upon completion of work.

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

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

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

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

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

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

CULTURAL 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, City of Yreka staff 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 of Yreka shall comply with §15064.5 (e) (1) of the CEQA Guidelines and PRC §7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the County Coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the NAHC to identify the most likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed in §15064.5 (e) has been completed.

GEOLOGY AND SOILS

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

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

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

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

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

HAZARDS/HAZARDOUS MATERIALS

Implementation of **MM 4.3.2** and **MM 4.3.3.**

LAND USE AND PLANNING

Implementation of the MMs identified in this Section.

NOISE

MM 4.13.1 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 4.13.2 Stationary equipment (pumps, compressors, etc.) used during project construction shall be located at the furthest practical distance from nearby noise-sensitive land uses.

TRIBAL CULTURAL RESOURCES

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

UTILITIES AND SERVICE SYSTEMS

Implementation of the MMs identified in this Section.

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.

Juliana Lucchesi
Community Development Director

07/15/2024
Date

SECTION 3.0 PROJECT DESCRIPTION

3.1 PROJECT BACKGROUND, NEED, AND OBJECTIVES

City of Yreka Wastewater Treatment Plant, June 9, 2023.

Current Wastewater System

The City of Yreka (City) provides wastewater collection and treatment services to residential and non-residential uses throughout the City. The system consists of ~220,000 feet of collection sewer lines, ~42,000 feet of trunk sewer lines, four lift stations, and a Wastewater Treatment Plant (WWTP). The current treatment process includes screening, activated sludge secondary treatment, aerobic sludge digestion, clarification, filtration, and disinfection by chlorination.

The collection system transports wastewater from service connections within the sewer service area to the City's WWTP, which was originally constructed in 1972. According to the City of Yreka 2019 Master Sewer Plan prepared by PACE Engineering in May 2020, the WWTP is an activated sludge facility with a design average dry weather flow (ADWF) of 1.0 millions of gallons per day (MGD) and a peak wet weather flow (PWWF) of 6.8 MGD.

Raw wastewater enters the headworks where it is screened and flows via gravity to one of two treatment trains. Both treatment trains are identical and consist of an aeration basin and secondary clarifier. Return activated sludge (RAS) is pumped from the secondary clarifier back to the headworks. Waste activated sludge (WAS) from the clarifiers is pumped to the aerobic digesters. Two sludge digesters are operated in series. Aerobically digested sludge is pumped to a centrifuge for mechanical dewatering and final disposal at the Dry Creek Landfill in Eagle Point, Oregon.

Wastewater Treatment Plant Headworks

Wastewater Disposal Fields, June 9, 2023.

Secondary effluent from both clarifiers flows to the chlorine contact basin where it is disinfected with sodium hypochlorite. Disinfected effluent passes through a tertiary microscreen disk filter and is then pumped via a 10-inch-diameter outfall line to ~22.4 acres of subsurface drip disposal fields located ~2,500 feet north of the WWTP and adjacent to Yreka Creek.

The subsurface drip disposal fields were designed to accommodate up to 1.3 MGD of treated effluent disposal. The area is divided into 29 disposal zones.

Effluent is conveyed to one of four groups of six zones or one group of five zones and dispersed through a network of ½-inch-diameter Geoflow tubing spaced two feet apart and buried six to eight inches below the ground surface. Each zone contains a moisture sensor. If the moisture exceeds 90 percent, effluent is automatically diverted to a new group; otherwise, dosing occurs at seven minutes per group. The zones within each disposal group are typically not adjacent to one another to ensure that treated effluent is spread throughout the disposal area. The WWTP also has four percolation ponds that are used when flows are in excess of the microscreen's 1.0 MGD capacity. The total area of the percolation ponds is ~12 acres; however, their percolation capacity is unknown.

The WWTP is subject to North Coast Regional Water Quality Control Board (NCRWQCB) Order R1-2021-0016 (WDID 1A84073OSIS), *Waste Discharge Requirements [WDRs] for the City of Yreka Wastewater Treatment Facility, Siskiyou County*[1]. The WDRs include discharge prohibitions; effluent limitations for biochemical oxygen demand (BOD), total suspended solids, settleable solids, pH, and total coliform organisms; requirements for solids handling; and receiving water (groundwater) limitations.

The Order also includes a Mitigation Monitoring and Reporting Program (MMRP) that specifies requirements for monitoring influent, effluent, groundwater, surface water (Yreka Creek), and monitoring for the presence or absence of surfacing effluent in the leach field. In accordance with the Order, the City must conduct weekly effluent monitoring and submit monthly and annual reports, and source control activity reports to the NCRWQCB as specified.

Project Need and Objectives

The purpose of the project is to replace aging infrastructure, improve the treatment process, and increase efficiency of the WWTP.

Supervisory Control and Data Acquisition (SCADA) System

The WWTP does not have a SCADA system to facilitate operation and monitoring of the plant. Currently, plant operators must be at the WWTP continuously during changing or high flows in order to prevent discharge violations. The SCADA system would allow operators to monitor and control major processes at the WWTP and lift stations remotely.

[1] *North Coast Regional Water Quality Control Board Order R1-2021-0016 (WDID 1A84073OSIS), Waste Discharge Requirements for the City of Yreka Wastewater Treatment Facility, Siskiyou County.* https://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2021/210016YrekaWDR.pdf

Headworks

There are no flow-metering devices on the influent wastewater lines at the headworks. The addition of electronic flow metering devices would allow operators to anticipate needed changes in the process control and allow automatic control of the return activated sludge (RAS) to maintain optimal concentrations of mixed liquor suspended solids (MLSS) in the aeration basins.

Aeration Basin

The aerators in the aeration basins are at the end of their service lives and need to be replaced. In addition, the current 20 horsepower (HP) aerators are undersized to meet flow demands and need to be upsized to 25 HP. In order to better maintain dissolved oxygen (DO) levels and proper mixing simultaneously, mechanical mixers need to be installed. Mixers would also allow the WWTP to cycle the aeration basins to promote denitrification.

Secondary Clarifier

The existing clarifier drives and mechanisms, installed in the 1970s, have reached the end of their useful service lives, and replacement parts are no longer available for many components. More modern equipment and features will allow the clarifiers to produce higher-quality effluent and increase capacity. The electrical wiring, also installed in the 1970s, is in desperate need of replacement. The following improvements/components are needed: new drive unit, energy dissipating inlet, flocculating feedwell, new scum removal equipment, the addition of density current baffle, and replacement of the electrical system.

Additionally, the secondary clarifiers experience significant growth of algae along the launder weir, which affects downstream processes and requires more chlorine to disinfect the biological load caused by this. To address this algae growth, launder covers should be installed to inhibit algae growth and prevent upsetting downstream processes.

Disinfection Facility

As noted above, when flows are in excess of 1.0 MGD, flows are directed to the percolation ponds. When discharging to the ponds, the City must satisfy disinfection requirements. Since peak flows above 3.0 MGD are not uncommon, improvements to the disinfection process are required.

Filtration

The WWTP operators have reported that there is no noticeable improvement in water quality through the disk filter, and the filter facility is in poor condition and needs to be replaced. A number of conduit penetrations into the control panel from the filter sump do not have “EYS” seals, which allows chlorine “off-gas” to enter the filter control panel. As a result, many of the electrical and instrumentation components inside the control panel have corroded beyond repair. The control panel and components are on the verge of failure and are in desperate need of replacement.

In addition, the filtration facility needs to be relocated upstream of the disinfection system to not only provide for more efficient and effective disinfection, but to allow the ability for the WWTP to produce Title 22 recycled water and for potential conversion to ultraviolet (UV) disinfection.

Digesters

The current coarse-bubble diffusers in the aeration basins fill with solids when the diffusers are turned off to reduce power costs. In order to allow periodic resting periods for the blowers, fine-bubble diffused aeration, which uses a membrane that prevents solids from migrating into the pipe when the diffuser is offline, is recommended. Furthermore, advancements in technology would allow for the optimization of the digesters through the installation of mechanical mixers, automatic decanter, and a control system to coordinate the digester’s components, which would greatly improve both energy and treatment efficiency.

Sludge Dewatering

Aerobically digested sludge is currently mechanically dewatered with a single centrifuge before hauling to the landfill. No redundancy is present to dewater sludge, so if the centrifuge is offline for an extended period of time for maintenance or failure, the WWTP would be unable to dewater sludge for disposal. Expanding the dewatering facility and adding an additional centrifuge would provide 100 percent redundancy.

Disposal Fields

The effluent disposal fields are not integrated into any SCADA system and during an on-site investigation by a team of electrical engineers, they were unable to determine if the system was even active based on the lack of an interface with the controls. The controls building is a dilapidated shed that is located within a Federal Emergency Management Agency (FEMA)-designated 100-year flood hazard zone. In order to improve operations and efficiency in the system, the controls building needs to be replaced, preferably outside of a designated flood hazard zone, new controls with operator interface needs to be installed, and the electrical conduit, moisture sensors, solenoid control valves, and appurtenant facilities need to be replaced and integrated into a SCADA system.

3.2 PROJECT COMPONENTS / PHYSICAL IMPROVEMENTS

This section describes the proposed improvements that are the subject of this Initial Study. Proposed improvements include the following:

Wastewater Treatment Plant (Figures 5 and 6)

- Headworks improvements would include the installation of flow meters on the influent flow lines and grinder upstream of the spiral screen. Minor piping improvements would be made to ensure that influent flow meters function properly.
- Improvements in Aeration Basin 1 and Aeration Basin 2 would include replacement of the 20 horsepower (HP) surface aerators with new 25 HP surface aerators (three aerators in each basin).
- Both secondary clarifiers would be improved with new launder cover and density current baffles. The drive units, energy dissipating inlet, flocculation feedwell, and scum removal equipment would be replaced.
- A polymer scale would be installed adjacent to each of the digesters.
- The RAS, WAS, scum, sludge, water, and drainage pumps would be replaced and upsized if additional capacity is needed.
- The existing chlorine contact basin would be demolished and filled in.
- A new disinfection facility would be constructed in the northern area of the WWTP property. Two options for disinfection are being considered in this location as described below. For both options, disinfected effluent would discharge into a new effluent discharge line.

  Chlorine Disinfection: A new chlorine contact basin with baffled walls to create serpentine flow would be installed, similar to the existing chlorine contact basin.

  Ultraviolet (UV) Disinfection: A new building would be constructed to house UV disinfection equipment, electrical components, and controls. It is anticipated that the UV facility would have a smaller footprint than the chlorine contact basin.
- A new filtration building would be constructed south of the new disinfection facility. The existing disk filtration facility would be demolished.

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All depictions are approximate. Not a survey product. 10.20.23

0 150 Feet

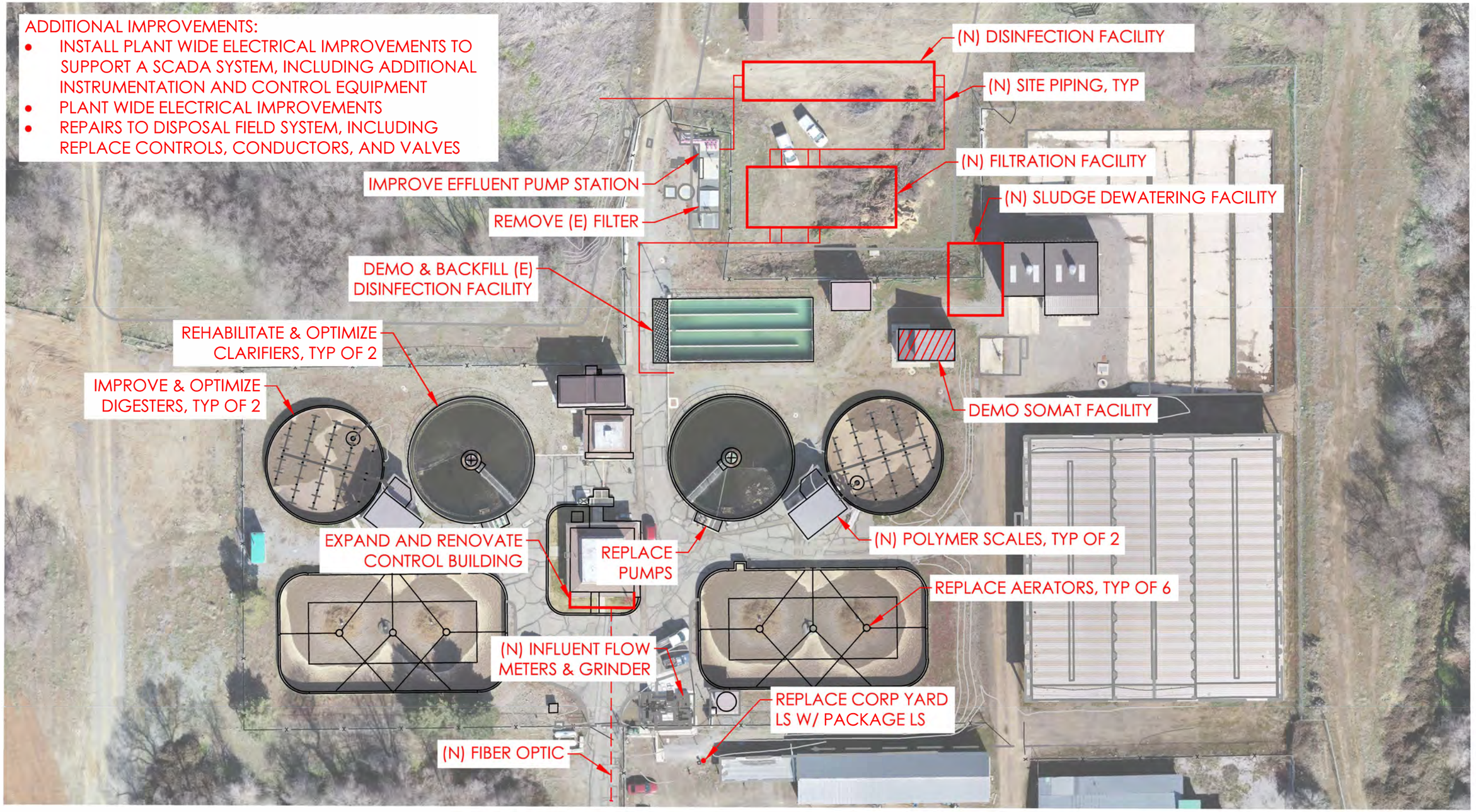
Figure 5

Wastewater Treatment Plant Improvements

ENPLAN

ADDITIONAL IMPROVEMENTS:

- INSTALL PLANT WIDE ELECTRICAL IMPROVEMENTS TO SUPPORT A SCADA SYSTEM, INCLUDING ADDITIONAL INSTRUMENTATION AND CONTROL EQUIPMENT
- PLANT WIDE ELECTRICAL IMPROVEMENTS
- REPAIRS TO DISPOSAL FIELD SYSTEM, INCLUDING REPLACE CONTROLS, CONDUCTORS, AND VALVES



0 50 100

1 IN = 50 FT

PACE® ENGINEERING

CITY OF YREKA
WWTP IMPROVEMENT PROJECT
SELECTED PROJECT - WWTP

FIGURE 6

DATE: 2/24

JOB # 69.61

Plot Date: February 23, 2024 - 9:25 am Login Name: CPaget
File Name: M:\Land Projects\0069\61 WWTP Improvements\01 CAD\03 SD\PER Figures\Fig 10_Selected Project_WWTP.dwg Layout: IMPROVEMENTS

- Coarse-bubble diffusers in both digesters would be replaced with fine-bubble diffusers. Instrumentation, controls, mechanical mixers, and an automated decanter would be installed to optimize operations.
- A new SCADA system would be installed at the WWTP. An existing ground-mounted antenna near the effluent pump station would be removed, and a new roof-mounted antenna would be installed on the control building.
- The control building would be expanded to house the new SCADA equipment. The roof of the control building would be replaced. Accessibility improvements would be completed in accordance with the Americans with Disabilities Act (ADA) and California Building Code.
- Electrical improvements would be completed throughout the WWTP.
- A new fiber optic line would be installed from the City's Corporation Yard to the WWTP Control Building (see **Figure 5**).
- A new package lift station would be installed immediately adjacent to the existing lift station, southeast of the existing headworks. Once the new lift station is operational, the existing lift station would be removed.
- A new sludge dewatering facility would be installed.
- The existing SOMAT facility would be demolished.

Disposal Fields (Figure 7)

- New electrical conduit and pull boxes would be installed in the disposal fields via open-cut trenching, and the existing moisture sensors, solenoid control valves, and concrete valve boxes, would be replaced.
- A new concrete masonry unit (CMU) building would be constructed adjacent to SR 263 to house the controls. Once the new CMU building is fully operational, the existing shed would be demolished and removed.
- The antenna on the existing control building would be replaced with an antenna on the new CMU building.

Lift Stations (Figures 3 and 4)

- At all four lift station locations, antennas on ground-mounted poles, cables, and radios would be installed, and minor modifications would be made to the existing control panels to support the SCADA system.

Construction Methods and Considerations

The majority of improvements at the WWTP would be completed in previously disturbed areas. The new disinfection facility, filtration facility, and sludge dewatering facility would be constructed north/northeast of the existing chlorine contact basin and south of the existing percolation ponds in relatively undisturbed areas. Although the area would be cleared and graded to accommodate the new improvements, no mature trees would be removed. Utility lines would be installed underground by open-cut trenching. Following installation of the pipe, electric conduit, and fiberoptic line, the trench would be backfilled with select native soils. Paved areas that are disturbed during construction would be re-paved following completion of the project. Unpaved areas would be revegetated as necessary to minimize erosion. At the disposal field site, the new control building for the disposal field would be located adjacent to SR 263, outside of the floodplain. Construction equipment and vehicles would be staged in previously disturbed areas at the City's Corporation Yard, located immediately south of the WWTP.

Study Area Boundary
Potential Disposal Building Locations
Conduit Alignments
Solenoid Control Valves
Moisture Sensors
Pull Boxes

0 175 Feet

All depictions are approximate. Not a survey product. 03.08.24

Figure 7

Disposal Fields Improvements

ENPLAN

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The project is subject to standards and specifications included in the *National Pollutant Discharge Elimination System* (NPDES) *General Permit for Waste Discharge Requirements* (WDRs) for *Storm Water Discharges from Small Municipal Separate Storm Sewer Systems* (MS4s), adopted by the State Water Resources Control Board (SWRCB) on February 5, 2013, and amended by the Executive Director of the SWRCB on September 2, 2015, June 20, 2016, and January 24, 2018, and by the SWRCB on December 19, 2017. The City of Yreka's procedures, standards, and specifications for implementing the post-construction requirements of the MS4 General Permit are contained in the Humboldt Low Impact Development Stormwater Manual [2].

Additionally, the discharge of wastewater from the WWTP is regulated by the SWRCB under WDR Order No. R1-2021-0016 (WDID No. 1A84073OSIS). The Order establishes discharge prohibitions, effluent limitations, receiving water limitations, monitoring requirements, and a requirement for the continued assessment of whether discharges are affecting groundwater quality. These provisions ensure that the discharge does not result in exceedances of water quality standards and protect beneficial uses of groundwater and surface waters within the Shasta Valley Hydrologic Area.

It is anticipated that construction would commence in the spring of 2028 and be completed in 2030; however, proposed improvements may be phased based on the availability of funding and/or supply chain issues.

[2] *North Coast Stormwater Coalition, Humboldt Low Impact Development Stormwater Manual.* *http://northcoaststormwatercoalition.org/index.php/low-impact-development-lid-2/.*

SECTION 4.0 ENVIRONMENTAL IMPACT ANALYSIS

4.1 AESTHETICS

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

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

REGULATORY CONTEXT

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

STATE

California Building Standards Code

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

California Scenic Highway Program

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

LOCAL

City of Yreka General Plan

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

Land Use Element		
Goal	LU.6	To protect the unique views from Yreka of the surrounding mountains.
Objective	LU.6	The objective of this goal is to help guide hillside development and protect the integrity of the ridge tops.
Program	LU.4.F	During all project reviews, significant trees and rock outcroppings should be protected to the extent practical.
	LU.6.C	Consider views during project review and design, maintaining visual access whenever practical.

City of Yreka Zoning Code

Section 16.46.060 (Outdoor Lighting) of the City's Zoning Code states that all lighting shall be designed to prevent unreasonable glare to adjoining properties and be controlled by such reasonable means as are practical to prevent sky-reflected glare. Directional prismatic lenses and hooding devices should be utilized when possible.

DISCUSSION OF IMPACTS

Questions A and C

Scenic vistas are defined as expansive views of highly valued landscapes from publicly accessible viewpoints (e.g., public roadways, parks and recreation areas, publicly accessible open space areas, and other public gathering places). Scenic vistas include views of natural features such as mountains, hills, valleys, water courses, outcrops, and natural vegetation, as well as man-made scenic structures. The City of Yreka is located in an area considered to have high scenic value. The City is located in a valley surrounded by mountains in the Klamath National Forest to the north and west, Butcher Hill and the Shasta Valley to the east, and the Kilgore Hills to the southeast. The City's General Plan Land Use Element requires that development projects in the City consider views during project review to protect the unique views from Yreka of the surrounding mountains.

Scenic resources in the study area include Yreka Creek, trees and other vegetation, open space, and the rolling hills that surround the community. The project area is visible to individuals living and working in the area and to travelers on adjacent roadways, including SR 263. The most prominent views of the WWTP site would be from the Deer Creek segment of the Yreka Creek Greenway trail system, located east of the WWTP between Yreka Creek and Deer Creek Way. However, due to the riparian corridor of Yreka Creek, views of the WWTP improvements would be limited. The most prominent views of the disposal fields would be from SR 263.

Pipeline and conduit improvements at the WWTP and disposal fields would be subsurface, and no long-term visual impacts would occur. Short-term visual impacts would occur during construction due to site preparation, trenching, and staging of construction equipment and materials. However, this is a temporary impact that would cease when construction is complete.

Project components that have a potential to result in long-term visual impacts include the new disinfection facility, filtration facility, sludge dewatering facility, expanded control building, and replacement lift station at the WWTP site, as well as the replacement control building at the disposal fields site. The addition of SCADA equipment (i.e., ground-mounted antennas) at the lift stations also has a potential for visual impacts.

Although portions of the WWTP may be visible from the adjacent walking trail and to the traveling public as background views from SR 263, most of the facilities would be screened by existing buildings and trees and other vegetation on site. The new control building at the disposal fields would be ~600 square feet and ~10-12 feet in height. The control building would be located adjacent to SR 263. Nearby features in the built environment include single-family residences and outbuildings, utility poles, overhead utility lines, and a commercial storage facility. Given existing features in the built environment and screening provided by trees and vegetation, the new control building would not be a prominent visual feature.

LS improvements include the installation of antennas on ground-mounted poles adjacent to the existing lift stations. In addition to residences and industrial structures, other features in the environment surrounding LS 1, LS 2, LS 3, and LS 4 include overhead utility lines and light poles. The proposed antennas at the lift stations are similar to other pole-mounted facilities in the study area and would not significantly change the visual character of the area. Therefore, because the proposed improvements would not have an adverse effect on a scenic vista, would not degrade the existing visual character or quality of public views of the site and its surroundings, and would not substantively block views of the surrounding mountains, impacts would be ***less than significant.***

Question B

According to the California Scenic Highway Mapping System, there are no designated scenic highways in Siskiyou County (Caltrans, 2023). SR 3 is located to the south of the WWTP site and is eligible for designation as a State Scenic Highway; however, improvements at the WWTP would not be visible from SR 3. LS 1 and LS 2 are located adjacent to the segment of SR 3 that is eligible for designation as a scenic highway. Improvements at the lift stations are limited to installation of antennas on ground-mounted poles, cables, and radios, and minor modifications to the existing control panels. These improvements would not require the removal of trees and would not damage any other scenic resources; therefore, there would be ***no impact*** on a State Scenic Highway.

Question D

The proposed project would include installation of safety lighting at the new facilities at the WWTP site and the control building at the disposal field site. As described under Regulatory Context, new permanent lighting must comply with CALGreen §5.106.8 mandatory light pollution reduction measures for new non-residential uses. The intent of the measures is to maintain dark skies and to ensure that newly constructed projects reduce the amount of backlight, uplight, and glare (BUG). Further, Section 16.46.060 (Outdoor Lighting) of the City's Zoning Code requires all lighting to be designed to prevent unreasonable glare to adjoining properties and be controlled to prevent sky-reflected glare.

It is not anticipated that temporary lighting during construction would be needed because the majority of work would occur during times of the year with extended daylight. Further, as discussed in Section 4.13 (Noise), work is limited to between the hours of 7:00 AM and 7:00 PM, Monday through Saturday, and 8:00 AM to 5:00 PM, on Sunday. Therefore, the project would not create a new source of substantial light or glare that would adversely affect day- or night-time views in the area; impacts would be ***less than significant.***

CUMULATIVE IMPACTS

Potential cumulative projects in the area include growth according to the build-out projections in the City of Yreka's General Plan. As documented above, the project does not include any features that would result in a significant permanent change to the visual character of the area. Exterior lighting installed at the new facilities at the WWTP and disposal field sites would be similar to existing conditions and would comply with CALGreen light pollution reduction requirements and the City's lighting standards. All new development within the City must comply with CAL Green and the City's lighting standards to minimize potential impacts related to excessive lighting and glare. Therefore, the project's aesthetic impacts would not be cumulatively considerable.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Transportation (Caltrans). 2023. California Road System – Functional Classification. https://www.arcgis.com/apps/webappviewer/index.html?id=026e830c914c495797c969a3e5668538. Accessed June 2024.

City of Yreka. 2024. City of Yreka Municipal Code. https://library.municode.com/ca/yreka/codes/code_of_ordinances?nodeId=TIT16ZO. Accessed June 2024.

_____. 2003. City of Yreka General Plan Update, 2002-2022. http://www.ci.yreka.ca.us/DocumentCenter/View/119/General-Plan-PDF?bidId=. Accessed June 2024.

4.2 AGRICULTURE AND FOREST RESOURCES

Would the project:

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

REGULATORY CONTEXT

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

STATE

California Farmland Mapping and Monitoring Program (FMMP)

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

Williamson Act

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

Forest Land and Timberland

PRC §12220(g) defines Forest Land as *"land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest*

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

LOCAL

City of Yreka

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

Conservation, Open Space, Parks and Recreation Element		
Goal	CO.3	To ensure continued agriculture and timber uses in Yreka Planning Area.
Objective	CO.3	The objective of this goal is to reduce the impact of urban uses on agricultural lands.
Programs	CO.3.A	During the project review process, address the impacts of siting environmentally sensitive uses near areas where conflicts with agricultural or timber production activity may occur.
	CO.3.B	Maintain buffer zones around areas of existing and planned agricultural and timber processing activities. Do not permit sensitive uses to encroach within buffer zones. Such buffer zones may vary in width based upon existing and proposed uses, vegetation, and simply topography. The buffers may be permanent, or phased construction areas.
	CO.3.D	Those lands designated by Siskiyou County on the Important Farmland Map of 1998 as Farmlands of Local Importance, while lying within the Planning Area, should be preserved for agricultural purposes.

DISCUSSION OF IMPACTS

Questions A, B, and D

According to the *Important Farmland in California* map published by the FMMP, the project site is not designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Farmland of Local Importance (DOC, 2023).

The WWTP site is designated as Urban and Built-Up Land. The disposal fields are designated as Grazing Land, indicating that the land contains vegetation suited to the grazing of livestock; however, the land is not used for grazing due to potential damage to the disposal fields. Lift Stations 1 and 2 are located on land designated as Other Land. The Lift Station 3 site is designated as Grazing Land; however, this land is not used for grazing due to a fence blocking access to the site by grazing animals. Lift Station 4 is located on land designated as Urban and Built-Up Land. Although properties in the surrounding area may be suitable for use as grazing land, the project does not have any components that would interfere with or preclude future agricultural uses in the area or result in other changes in the existing environment that could result in the conversion of farmland to non-agricultural use. In addition, according to the City's Zoning Map, areas in which improvements are proposed are not currently zoned for agricultural uses nor are they subject to a Williamson Act contract (City of Yreka, 2004).

Because the proposed project does not include any components that would interfere with or preclude future agricultural uses in the study area or result in the conversion of farmland to non-agricultural use, 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 (City of Yreka, 2003, 2004) and are not zoned for timberland production (City of Yreka, 2004). 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 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."*

Although portions of the disposal field site meet the definition of forest land in that they could potentially support 10 percent native tree cover under natural conditions, no trees would be removed to accommodate the proposed improvements. Therefore, the proposed project would not conflict with existing zoning or cause rezoning of forest land or timberland or result in the loss of forest lands or the conversion of forest lands to non-forest uses; there would be ***no impact.***

CUMULATIVE IMPACTS

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 farmland or forest lands.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Conservation. 2023. Important Farmland Finder. https://maps.conservation.ca.gov/dlrp/ciff/. Accessed January 2024.

City of Yreka. 2004. Zoning Map. http://www.ci.yreka.ca.us/DocumentCenter/View/629/Zoning-Map-PDF?bidId=. Accessed January 2024.

____. 2003. City of Yreka General Plan Update, 2002-2022. http://www.ci.yreka.ca.us/DocumentCenter/View/119/General-Plan-PDF?bidId=. Accessed January 2024.

4.3 AIR QUALITY

Would the project:

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

REGULATORY CONTEXT

FEDERAL

Federal Ambient Air Quality Standards

The U.S. Environmental Protection Agency (USEPA), under the federal Clean Air Act (CAA), establishes maximum ambient concentrations for criteria air pollutants (CAPs), known as the National Ambient Air Quality Standards (NAAQS) (USEPA, 2022). The NAAQS are designed to protect the health and welfare of the populace with a reasonable margin of safety. **Table 4.3-1** identifies the 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. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of carbon monoxide.	• Chest pain in patients with heart disease. • Headache. • Light-headedness. • Reduced mental alertness.	Motor vehicle exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.

Nitrogen Dioxide (NO_2)	Nitrogen dioxide is a reddish-brown gas formed when nitrogen (N_2) combines with oxygen (O_2). Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere and is related to traffic density.	• Respiratory symptoms. • Damage to lung tissue. • Worsening of cardiovascular disease. • Precursor to ozone and acid rain. • Contributes to global warming and nutrient overloading which deteriorates water quality. • Causes brown discoloration of the atmosphere.	Automobile and diesel truck exhaust, petroleum-refining operations, industrial sources, aircraft, ships, railroads, and fossil-fueled power plants.
Sulfur Dioxide (SO_2)	Sulfur dioxide is a colorless, nonflammable gas that results mainly from burning high-sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries.	• Respiratory symptoms. • Worsening of cardiovascular disease. • Damage to a variety of materials, including marble, iron, and steel. • Damages crops and natural vegetation. • Impairs visibility. • Precursor to acid rain.	Petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and large ships, and fuel combustion in diesel engines.
Particulate Matter ($PM_{2.5}$ and PM_{10})	Particulate matter is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols that are small enough to remain suspended in the air for a long period of time. Particulate matter with a diameter of 10 microns or less (PM_{10}) is inhalable into the lungs and can induce adverse health effects. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter ($PM_{2.5}$). Therefore, $PM_{2.5}$ comprises a portion of PM_{10}.	• Premature death. • Hospitalization for worsening of cardiovascular disease. • Hospitalization for respiratory disease • Asthma-related emergency room visits. • Increased symptoms, increased inhaler usage	Dust- and fume-producing construction activities, power plants, steel mills, chemical plants, unpaved roads and parking lots, woodburning stoves and fireplaces, wildfires, motor vehicles, and other combustion sources. Also a result of photochemical processes.
Lead (Pb)	A heavy metal that occurs both naturally in the environment and in manufactured products.	• Impaired mental functioning in children • Learning disabilities in children • Brain and kidney damage. • Reproductive disorders. • Osteoporosis.	Lead-based industrial production (e.g., battery production and smelters), recycling facilities, combustion of leaded aviation gasoline by piston-driven aircraft, and crustal weathering of soils followed by fugitive dust emissions.

Source: U.S. Environmental Protection Agency, 2023.

Clean Air Act (CAA) - Federal General Conformity Rule

The General Conformity Rule of the CAA requires that all federally funded projects conform to the applicable State Implementation Plan (SIP). The Conformity Rule applies to projects in areas that are designated as nonattainment or maintenance areas for any of the six federal criteria air pollutants when the total direct and indirect emissions of the criteria pollutant (or its precursors) are at or above the de minimis thresholds listed in Code of Federal Regulations (CFR) Title 40, §93.153(b).

Because Siskiyou County is designated as attainment or unclassified areas for all federal air quality standards, federal conformity requirements do not apply to the proposed project (USEPA, 2023).

STATE

State Ambient Air Quality Standards

The California CAA establishes maximum concentrations for the seven federal CAPs, as well as the four additional air pollutants identified below. The four additional standards are intended to address regional air quality conditions, not project-specific emissions. These maximum concentrations are known as the California Ambient Air Quality Standards (CAAQS). The California Air Resources Board (CARB) has jurisdiction over local air districts and has established its own standards and violation criteria 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)

Pollutant	Averaging Time	California Standards	National Standards
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 ppm
	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, n.d.a . Notes: mg/m^3=milligrams per cubic meter; ppm=parts per million; ppb=parts per billion; µg/m^3=micrograms per cubic meter.

California Regional Haze Plan

The USEPA adopted the Regional Haze Rule in 1999, which includes requirements to protect visibility in Class I areas, which are the largest national parks and wilderness areas in the United States. In 2009, CARB prepared the California Regional Haze Plan that sets forth goals for improving visibility in the State's Class I areas. The Plan was most recently updated in June 2022 (CARB, 2022a).

Toxic Air Contaminants

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

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

In-Use Off-Road Diesel-Fueled Fleets Regulation

CARB adopted the In-Use Off-Road Diesel-Fueled Fleets Regulation to reduce NO_X, diesel particulate matter, and other criteria pollutant emissions from various vehicles subject to the regulation. The regulation covers a wide range of vehicle types, including, but not limited to, vehicles used in construction, mining, industrial operations, and other industries. The regulations were most recently updated in August 2023 and became effective on October 1, 2023 (CARB, 2023). The regulations require fleets to phase-out use of the oldest and highest polluting off-road diesel vehicles in California earlier or beyond what was required of fleets in the previous Off-Road Regulation. The amended regulations will be phased in starting in 2024 through the end of 2036. Beginning January 1, 2024, the updated regulations also require the use of renewable diesel (99 or 100 percent renewable) in all vehicles that are subject to the regulation, subject to certain exemptions.

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

Mobile Source Strategy

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

LOCAL

Siskiyou County Air Pollution Control District

The Siskiyou County Air Pollution Control District (SCAPCD) has the responsibility of enforcing federal and state air quality regulations in Siskiyou County (County). It also issues rules and regulations setting specific standards of operation, defining permit requirements, and setting emission limits. For new or modified stationary sources, the SCAPCD has defined 250 pounds per day (lbs/day) as the threshold of significance for NO_X, $PM_{2.5}$, PM_{10}, and SO_2 emissions, and 2,500 lbs/day as the threshold of significance for CO emissions (Rule 6.1). Siskiyou County is currently designated in attainment or unclassified status for all federal and state criteria pollutants; therefore, the County is not required to have a local air quality attainment plan (CARB, 2022c).

City of Yreka

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

Conservation, Open Space, Parks and Recreation Element		
Goal	CO.5	To maintain and protect the air quality within the City of Yreka at acceptable levels as defined by state and federal standards.
Objective	CO.5	The objective of this goal is to work with development to ensure that their contribution to this air quality problem is kept as low as possible.
Programs	CO.5.A	Through the project review process, minimize adverse effects on the community of odor and emissions generated by industrial uses.
	CO.5.B	Work with the Siskiyou County Air Quality Management District in efforts to maintain air quality standards and to minimize air quality impacts associated with new development.

DISCUSSION OF IMPACTS

Questions A and B

As discussed above, Siskiyou County is currently designated in attainment or unclassified status for all federal and state criteria pollutants and therefore is not required to have a local air quality attainment plan. However, the SCAPD 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.

Project emissions were estimated using Version 2022.1.1.22 of the California Emissions Estimator Model (CalEEMod). CalEEMod reports both maximum daily emissions (pounds per day [lbs/day]) and overall annual emissions (tons per year) for both construction and operational emissions. CalEEMod does not directly calculate ozone (O_3) emissions. Instead, the emissions of ozone precursors are calculated. Ozone precursors are quantified as ROG and NO_X which, when released, interact in the atmosphere and produce ozone. Output files, including all site-specific inputs and assumptions, are provided in **Appendix A**. Project-specific assumptions and inputs include, but are not limited to, the following:

- Emissions from construction are based on all construction-related activities associated with proposed and future uses, including but not limited to grading, site preparation, application of architectural coatings, use of construction equipment, material hauling, trenching, and paving.
- The increase in operational emissions would be due to the addition of electricity consumption to operate the new and expanded facilities at the WWTP and disposal fields.
- Total land disturbance would be approximately 1.5 acres; 3,000 cubic yards (CY) of fill material would be imported and 400 CY would be exported.
- The total area receiving architectural coatings would be 13,648 square feet.
- Demolition activities would generate approximately 300 tons of solid waste.
- The total area to be paved/repaved would be 0.18 acres.
- The project would implement standard mitigation measures.
- For purposes of the CalEEMod analysis, it was assumed that construction would start in the spring of 2026 and be completed by the end of 2027 (the actual construction start date will depend on funding availability).

Construction Emissions

Table 4.3-3 shows the highest daily levels of project construction emissions regardless of construction phase.

TABLE 4.3-3
Estimated Construction Emissions

Year	Pollutants of Concern											
	ROG		NO_X		PM_{10}		$PM_{2.5}$		CO		SO_2	
	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year
2026	1.5	0.13	14	0.98	3.68	0.1	1.97	0.06	15.4	1.12	0.03	Trace
2027	0.99	0.11	8.31	0.77	0.3	0.03	0.25	0.02	10.1	0.96	0.02	Trace

Source: CalEEMod, 2024.

Although neither the City of Yreka 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. As shown in **Table 4.3-3**, construction of the proposed project would not exceed these thresholds.

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 requires 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

Operation of the project would generate criteria pollutants from area sources (e.g., maintenance activities such as painting, etc.) and mobile sources (e.g., vehicle trips for employees, vendors, deliveries, etc.), as well as indirect emissions associated with energy use (e.g., operation of the new and expanded facilities at the WWTP).

Table 4.3-4 shows estimated operational emissions for the proposed project.

TABLE 4.3-4
Estimated Operational Emissions

Source	Pollutants of Concern											
	ROG		NO_X		PM_{10}		$PM_{2.5}$		CO		SO_2	
	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year	Max. lbs/day	Max. tons/year
Mobile	0.16	0.03	0.17	0.03	0.19	0.03	0.05	0.01	1.05	0.18	< 0.005	< 0.005
Area	0.21	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.35	0.03	< 0.005	< 0.005
Energy	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Total	**0.37**	**0.06**	**0.17**	**0.03**	**0.19**	**0.03**	**0.05**	**0.01**	**1.4**	**0.21**	**< 0.005**	**< 0.005**

Source: CalEEMod, 2024.

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

As shown in **Table 4.3-4**, operational emissions associated with the proposed project would not exceed the SCAPCD thresholds for ROG, NO_X, or PM_{10}. As documented in Section 4.6 (Energy), if medium-pressure lamps are used in the UV disinfection system, energy use could be significantly greater than the amount of energy used for a chlorine disinfection system. However, inefficient pumps, motors, controls, and other miscellaneous equipment at the WWTP and disposal fields would be replaced with National Electrical Manufacturers Association (NEMA) premium motors and energy-efficient equipment, resulting in a corresponding decrease in energy use and indirect emissions. The installation of SCADA systems at four of the City's lift stations will allow for remote operation, resulting in a reduction in trips by the City's WWTP operators to the lift stations. Therefore, operational impacts would be less than significant and no mitigation is required.

For both construction and operational emissions, the proposed project would not result in significant impacts associated with ozone (O_3), lead (Pb), hydrogen sulfide (H_2S), vinyl chloride, or visibility reducing particles as discussed below.

Ozone. CalEEMod does not directly calculate ozone emissions. Instead, the emissions associated with ozone precursors (ROG and NO_x) are calculated. Because the project would generate relatively low amounts of both ROG and NO_x, the potential for ozone production/emissions is less than significant.

Lead. Elevated levels of airborne lead at the local level are usually found near industrial operations that process materials containing lead, such as smelters and battery manufacturing/ recycling facilities. As these conditions are not applicable to the proposed project, the potential for lead emissions is less than significant.

Hydrogen Sulfide. Hydrogen sulfide is formed during the decomposition of organic material in anaerobic environments, including sewage treatment processes. The WWTP currently treats wastewater through percolation. Proposed improvements include upgrades to the current aeration facilities, which would improve the treatment process and reduce the potential for hydrogen sulfide emissions.

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

Visibility-Reducing Pollutants. Visibility-reducing pollutants generally consist of sulfates, nitrates, organics, soot, fine soil dust, and coarse particulates. These pollutants contribute to the regional haze that impairs visibility, in addition to affecting public health. According to the California Regional Haze Plan (CARB, 2022a), 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 or operation, and would not result in significant impacts associated with ozone, lead, hydrogen sulfide, vinyl chloride, or visibility-reducing particles.

Question C

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

Sensitive receptors adjacent to the WWTP, disposal fields, and lift stations include single- and multi-family residences. As stated in Questions A and B above, the proposed project does not have any components that would result in significant long-term operational emissions that would expose sensitive receptors to substantial pollutant concentrations. Construction at the disposal fields would occur as close as ~200 feet from dwelling units. Construction at the WWTP would occur ~500 feet northeast of dwelling units. Construction at the lift stations would occur ~200 feet from dwelling units off of Montague Road and ~700 feet from dwelling units off of N. Phillipe Lane.

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 receptors adjacent to the construction area could be exposed to elevated dust levels and other pollutants. **MM 4.3.1** is included to minimize potential impacts on sensitive receptors. Additionally, demolition activities at the WWTP could release airborne lead and asbestos particles that could affect sensitive receptors in the area, construction workers, and visitors to the site as described below.

Asbestos-Containing Material and Lead-Based Paint

Due to the age of the structures proposed for demolition, asbestos-containing materials and/or lead-based paint may be on the structures. Pursuant to the U.S. EPA's National Emissions Standards for Hazardous Air Pollutants (NESHAP) and CARB rules, asbestos and lead testing is required prior to demolition of the buildings. **MM 4.3.2** ensures that the buildings at the WWTP are tested prior to demolition. In addition, as required by **MM 4.3.3**, materials containing asbestos and/or lead must be disposed of at a facility that is specifically licensed to accept asbestos and/or lead. The work must be completed by a contractor qualified to complete sampling, handling, and disposal of asbestos and/or lead.

Compliance with federal, state, and local regulations, and implementation of **MM 4.3.1, MM 4.3.2, and MM 4.3.3.** ensures that construction workers and sensitive receptors in the project area are not adversely affected by air pollutants; therefore, impacts would be ***less than significant***.

Question D

Improvements at the WWTP, including more efficient aerators, a new disinfection facility, and a new more efficient lift station, are expected to reduce odors as compared to existing conditions. During construction, odors would be emitted from diesel equipment, paints, solvents, fugitive dust, and paving (asphalt). Odors from construction would be intermittent and temporary and generally would not extend beyond the construction area. Therefore, impacts would be ***less than significant***.

CUMULATIVE IMPACTS

Past, present, and future development projects contribute to a region's air quality conditions on a cumulative basis; therefore, by its very nature, air pollution is largely a cumulative impact. If a project's individual emissions contribute toward exceedance of the 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. Siskiyou County is in attainment or unclassified status for all federal and state criteria pollutants.

Implementation of the proposed project combined with future development within the project area could lead to cumulative impacts to air quality. However, all projects in Siskiyou County are subject to applicable CARB and SCAPCD rules and regulations, including mitigation measures that address impacts during construction.

Further, all development is subject to SCAPCD regulations for new or modified stationary sources and thresholds of significance for CO, NO_X, $PM_{2.5}$, PM_{10}, and SO_2 emissions (Rule 6.1). These thresholds were adopted to minimize cumulative impacts to air quality. Implementation of **MM 4.3.1, 4.3.2, and 4.3.3** 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 to reduce short-term air quality impacts during construction:

a. All material excavated, stockpiled, or graded shall be 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 as needed, preferably twice daily in the mid-morning and after work is completed each day, with care given to work areas with bare soil,

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

c. All on-site vehicles shall be limited to a speed of 15 miles per hour on unpaved roads.

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

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

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

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

h. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications.

MM 4.3.2 Prior to demolition and expansion of structures at the WWTP, a comprehensive survey shall be completed in locations where asbestos and lead-based paint are suspected. Removal, handling, and disposal of material containing asbestos or lead-based paint must be conducted in accordance with National Emission Standard for Hazardous Air Pollutants (NESHAP), California Occupational Health and Safety Administration (Cal/OSHA), and other applicable federal, State, and local regulations.

MM 4.3.3 In the event that previously undetected asbestos or lead-containing materials are discovered during construction, activities that may affect the materials shall cease until results of additional surveys are reviewed. Alternatively, the City of Yreka can assume that the materials are hazardous. Any identified hazardous materials shall be disposed of in accordance with applicable hazardous waste regulations.

DOCUMENTATION

California Air Resources Board. 2023. In-Use Off-Road Diesel-Fueled Fleets, Final Regulation Order (Rulemaking Website). https://ww2.arb.ca.gov/rulemaking/2022/off-roaddiesel. Accessed June 2024.

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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 or fill material into wetlands and waters of the U.S. The USACE requires that a permit be obtained prior to the placement of structures within, over, or under navigable waters and/or prior to discharging dredged or fill material into waters below the ordinary high-water mark (OHWM). There are several types of permits issued by the USACE that are based on the project's location and/or level of impact. Regional general permits are issued for recurring activities at a regional level. Nationwide Permits (NWPs) authorize a wide variety of minor activities that have minimal effects. Projects that are not covered under a regional general permit and do not qualify for a NWP are required to obtain a standard permit (e.g., individual permit or letter of permission).

Section 401

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

Federal Endangered Species Act (FESA)

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 (MBTA)

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

Fish and Wildlife Conservation Act

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

Bald and Golden Eagle Protection Act

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

Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA)

The 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 (CESA)

Under the 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 (Lake or Streambed Alteration)

California Fish and Game Code §1600 *et seq.*, requires that a project proponent enter into a Lake or Streambed Alteration Agreement (LSAA) 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. The LSAA will 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.

LOCAL

City of Yreka

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

Land Use Element		
Program	LU.11.A	The City may establish setbacks or buffer zones for a new development along Yreka Creek and its major tributaries, which may vary to permit inclusion of significant biological features and planting. Measures to protect plant species should include the evaluation of project sites to determine if habitat for special status plant species is present before commencement of any ground disturbing activities.
Conservation, Open Space, Parks and Recreation Element		
Goal	CO.4	Minimize impacts to wildlife and wildlife habitat as new development occurs within the City.
Objective	CO.4	Ensure that subsequent development clearly address its potential effect on the environment.
Programs	CO.4.A	Apply appropriate mitigation measures to development projects to minimize impacts to biological resources during and after construction.
	CO.4.B	Consider opportunities for habitat preservation and enhancement in conjunction with public facility projects. Construction activity involved in such preservation and enhancement shall be assessed to determine potential impacts on Coho salmon.

CO.4.C	Applicants for new development proposals shall be responsible for costs related to determining the potential for occurrence of protected plant and wildlife species within the proposed project area. City staff shall make the determination on the degree of field investigation required based on the project's location in relation to known occurrences.
CO.4.D	If the presence of protected species is determined to be likely, the project applicant shall be responsible for all costs associated with investigating species presence and preparation of any required mitigation plans.

DISCUSSION OF IMPACTS

Question A

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

The records searches included a review of California Natural Diversity Database (CNDDB) records for special-status plants and wildlife (CDFW, 2024); California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants for special-status plant species (CNPS, 2024); federal records for listed, proposed, and candidate plant and wildlife species under jurisdiction of the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (USFWS, 2024; NMFS, 2024a); critical habitat data maintained by the USFWS and NMFS (USFWS, 2024 and NMFS, 2021, 2024a); and essential fish habitat (EFH) records for anadromous fish species under the jurisdiction of the NMFS (NMFS, 2024b). Results of the records searches are included in **Appendix B**.

To determine the presence/absence of special-status plant and animal species, an ENPLAN biologist conducted a botanical and wildlife survey on June 9, 2023. The special-status plant species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. Some of the special-status wildlife species would not have been evident at the time the fieldwork was conducted; however, determination of their potential presence could readily be made based on observed habitat characteristics. The potential for each special-status plant and wildlife species to occur in the study area is evaluated in **Appendix B**.

Special-Status Plant Species

Review of the USFWS species list for the study area identified one federally listed plant species, Yreka phlox (Federally Endangered [FE], State Endangered [SE], California Rare Plant Rank [CRPR] 1B.2), as potentially occurring in the project area. The project area does not contain designated critical habitat for federally listed plant species.

Review of CNDDB records showed that no special-status plants have been reported in the project site. The following special-status species have been reported within a five-mile radius of the study area: Alkali hymenoxys (CRPR 2B.2), blushing wild buckwheat (CRPR 1B.3), Oregon polemonium (CRPR 2B.2), Peck's lomatium (CRPR 2B.2), pendulous bulrush (CRPR 2B.2), serpentine cryptantha (CRPR 1B.2), Shasta orthocarpus (CRPR 1B.1), single-flowered mariposa-lily (CRPR 1A), Siskiyou clover (CRPR 1B.1), Siskiyou mariposa-lily (CRPR 1B.2, State Rare), subalpine aster (CRPR 2B.3), and woolly balsamroot (CRPR 1B.2). CNDDB records identified one non-status species within five miles of the study area, woolly meadowfoam (CRPR 4.2).

The CNPS Inventory of Rare and Endangered Plants identified the following additional special-status plant species within the U.S. Geological Survey (USGS) Badger Mountain, Hawkinsville, Montague, and Yreka 7.5-minute quadrangles with a potential to occur in the project area: Greene's mariposa-lily (CRPR 1B.2), Scott Mountain bedstraw (CRPR 1B.2), and Scott Valley phacelia (CRPR 1B.2).

CNPS records also identified seven non-status species within these quadrangles: California androsace (CRPR 4.2), Howell's lewisia (CRPR 3.2), mountain lady's slipper (CRPR 4.2), Rydberg's spring beauty (CRPR 4.3), Siskiyou buckwheat (CRPR 4.3), Siskiyou onion (CRPR 4.3) and yellow triteleia (CRPR 4.3).

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

Special-Status Wildlife Species

Review of the USFWS species list for the study area identified the following federally listed wildlife species and candidates for federal listing as potentially occurring in the project site: conservancy fairy shrimp (Federally Endangered [FE]), Franklin's bumble bee (FE, State Candidate Endangered [SCE]), gray wolf (FE, SE), monarch butterfly (Federal Candidate [FC]), North American wolverine (Federally Proposed Threatened [FPT]), northern spotted owl (Federally Threatened [FT], State Candidate [SC], State Species of Special Concern [SSSC]), northwestern pond turtle (Federally Proposed Threatened [FPT], SSSC), vernal pool fairy shrimp (FT), vernal pool tadpole shrimp (FE), and yellow-billed cuckoo (FT, SE). The project area does not contain designated critical habitat for federally listed wildlife species.

Review of CNDDB records found that no special-status wildlife species have been reported in the project site. Six special-status wildlife species have been reported within a five-mile radius of the project site: American goshawk (SSSC), Crotch's bumble bee (SCE), Franklin's bumble bee (FE, SCE), greater sandhill crane (State Threatened [ST], State Fully Protected [SFP]), Lower Klamath marbled sculpin (SSSC), and western pond turtle (FPT, SSSC). CNDDB identified eight non-status species as occurring within a five-mile radius of the project site: great blue heron, highcap lanx, Morrison bumble bee, North American porcupine, Siskiyou shoulderband, Tehama chaparral, western pearlshell, and western ridged mussel.

As documented in the BSR, based on the habitat assessment conducted by ENPLAN, the study area has the potential to support the monarch butterfly.

Monarch Butterfly (Danaus plexippus* pop. 1*)

The monarch butterfly is currently designated as a candidate species for federal listing under the Endangered Species Act. Monarch butterflies are reliant on milkweed species for development and survival. Adults migrate from their overwintering sites on the California Coast, Baja California, and to some extent, the central Mexico mountains, in February and March, and reach the northern limit of their North America range in California, Oregon, Washington, Idaho, and Nevada in early to mid-June.

Eggs are laid solely on milkweed plants within the monarch butterfly summer breeding range (which includes all of Siskiyou County). Once hatched, larvae reach the adult stage in 20 to 35 days; most adults live two to five weeks. Several generations can be produced within one season, with the last generation beginning the southern migration to their overwintering range in August and September, where the butterflies live between six and nine months before migrating north again for the summer.

Narrow-leaf milkweed (*Asclepias fascicularis*) and showy milkweed (*Asclepias speciosa*) were observed during the botanical survey. A patch of approximately ten showy milkweed plants was observed in the north end of the wastewater disposal field. Several narrow-leaf milkweeds were found in the road shoulder near Lift Station 2.

Given the known presence of milkweeds in the project study area, it is possible for monarch butterfly to utilize the project site as summer breeding habitat. If removal of milkweeds is required during construction, monarch butterflies could be adversely affected. If the western migratory population of the monarch butterfly is not listed or proposed for listing and is no

longer a federal candidate for listing at the time project construction is initiated, no mitigation is required. If the western migratory population of the monarch butterfly remains a candidate or is formally designated as proposed, threatened, or endangered at the time of construction, then **MM 4.4.1** shall be implemented to avoid/minimize potential impacts to monarch butterflies.

No other special-status wildlife species were observed during the wildlife survey, nor are any expected to be present.

Anadromous Fish, Critical Habitat, and Essential Fish Habitat

Review of the NMFS species list showed that the Badger Mountain, Hawkinsville, Montague, and Yreka USGS 7.5-minute quadrangles include designated critical habitat for Southern Oregon/Northern California Coast (SONCC) Coho salmon Evolutionary Significant Unit (ESU) and Essential Fish Habitat (EFH) for Coho and Chinook salmon.

Because Yreka Creek is not present in the project site, there would be no direct impact to Coho or Chinook salmon, critical habitat for SONCC Coho salmon, or EFH. However, indirect effects could potentially occur if sediments or other pollutants enter Yreka Creek and other surface water features in the area and degrade habitat in the study area and/or downstream.

As noted in Section 1.7 (Permits and Approvals), the City is required to obtain coverage under the RWQCB NPDES permit for *Discharges of Storm Water Runoff Associated with Construction Activity,* which requires development of a SWPPP that includes a detailed listing of the potential sources of stormwater pollution and implementation of Best Management Practices (BMPs) to control erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat. 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.

Birds of Conservation Concern

The project area is located within the Pacific Flyway, and it is possible that migratory birds could nest in or adjacent to the project area. Nesting birds, if present, could be directly or indirectly affected by construction activities. Direct effects could include mortality resulting from removal of a tree/shrub containing 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 4.4.2**, the potential for adversely affecting nesting birds can be avoided/minimized by requiring that vegetation removal and other ground-disturbance activities associated with construction occur between September 1 and January 31. If this is not possible, a nesting survey shall be conducted by a qualified biologist within one week prior to removal of vegetation and/or the start of construction. If active nests are found on the project site, the City shall implement measures to comply with the MBTA and California Fish and Game Code. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures, and ongoing biological monitoring.

Implementation of **MM 4.4.1, MM 4.4.2**, and BMPs for erosion and sediment control ensures that the project's potential direct and indirect impacts on special-status species and their habitats is ***less than significant.***

Questions B and C

Sensitive natural communities are native plant communities that CDFW has identified as having limited distribution in the State or within a region, and that are vulnerable to environmental impacts of development. Sensitive natural communities may or may not contain special-status species. CDFW

assigns State rarity and threat rankings for terrestrial natural communities. Natural communities ranked S1 (critically imperiled), S2 (imperiled), and S3 (vulnerable) are considered sensitive natural communities. Wetlands and riparian habitats are also typically considered sensitive communities.

Habitat Types/Sensitive Natural Communities

No sensitive natural communities are identified by CNDDB within a five-mile radius of the project site. As documented in **Appendix B** and described below, habitat types in and adjacent to the project study area include urban, perennial grassland, and montane riparian.

Urban. Urban habitat is characterized as natural habitat that has been converted to facilitate development or has been sufficiently altered by planting non-native vegetation. The urban habitat in the study area consists of paved roads, driveways, and developed areas on the WWTP property and LS sites. Overall, this habitat has low value to wildlife species. Urban habitat is not considered a sensitive natural community.

Perennial Grassland. Generally speaking, perennial grassland habitat is composed primarily of perennial grass species such as California oatgrass, Pacific hairgrass, and sweet vernalgrass. Species composition is largely the result of geographic location and weather. A variety of animals use perennial grassland for foraging and nesting. Such species include the common garter snake (*Thamnophis sirtalis*), western terrestrial garter snake (*Thamnophis elegans*), northern harrier (*Circus hudsonius*), California vole (*Microtus californicus*), American kestrel (*Falco sparverius*), black-tailed jackrabbit (*Lepus californicus*), and coyote (*Canus latrans*).

In the study area, the perennial grassland community occurs in the wastewater disposal fields. Representative species include tall fescue (*Festuca arundinacea*), bulbous bluegrass (*Poa bulbosa*), rye (*Secale cereale*), shortpod mustard (*Hirschfeldia incana*), dyer's-woad (*Isatis tinctoria*), and yellow star thistle (*Centaurea solstitialis*).

The grassland community was planted and is maintained to facilitate wastewater disposal. It is not a natural community as described in the CDFW California Natural Communities List, nor is it a sensitive community. However, due to ponding, a low spot in the disposal fields supports approximately ¾-acre of wetland vegetation, including cattails and tules. This inclusion is further discussed below.

Montane Riparian. Montane riparian habitat usually occurs along streams or wetlands as a narrow band of dense, broad-leaved, deciduous trees, with a sparse understory. Montane riparian habitat has high value for wildlife species due to its vicinity to water sources and because it provides cover, migration corridors, and nesting and foraging opportunities. Montane riparian habitat may be associated with a variety of wetland types and other waters including lakes, ponds, seeps, bogs, meadows, rivers, and springs.

In the project area, montane riparian habitat is present immediately east of the study area for the wastewater disposal fields (along Yreka Creek) and in small patches at the WWTP. Riparian species present include black cottonwood (*Populus balsamifera* subsp. *trichocarpa*), white alder (*Alnus rhombifolia*), willows (*Salix* spp.), American dogwood (*Cornus sericea* subsp. *sericea*), mountain dogwood (*Cornus nuttallii*), common horsetail (*Equisetum arvense*), Oregon ash (*Fraxinus latifolia*), big-leaf maple (*Acer macrophyllum*), and Himalayan blackberry (*Rubus armeniacus*).

The montane riparian community in the study area most closely resembles the *Populus trichocarpa* alliance (61.120.01), described in the CDFW California Natural Communities List, which is considered a sensitive natural community. Riparian vegetation along Yreka Creek is entirely outside the work area and would not be directly affected by project implementation. BMPs would be implemented to control erosion and sedimentation and prevent indirect impacts to streams, watercourses, and aquatic habitat.

Figure 4.4-1 shows the location of the on-site montane riparian habitat. Trenching for the fiber optic line would occur ~25 feet from the edge of this riparian habitat. **MM 4.4.3** is included to require that prior to commencement of construction activities, exclusionary flagging or other markers shall be installed at the edge of the riparian habitat to ensure that it is not inadvertently affected by project implementation.

Wetlands and Other Jurisdictional Waters

ENPLAN conducted a field investigation on June 9, 2023, to identify wetlands and other waters of the U.S. and State in the study area. The field investigation was conducted in accordance with technical methods outlined in the *Corps of Engineers Wetlands Delineation Manual* (U.S. Department of the Army, Corps of Engineers, 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008), and the *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*.

During the field delineation, water was observed ponding in a low spot within the disposal fields. Based on field review and review of historic imagery, it was determined that the feature was created due to the effluent discharge. No flows were observed entering the area from other sources such as a hillside seep or watercourse. Because the area is isolated from all other waters, it is not subject to USACE jurisdiction. Based on consultation with the NCRWQCB (Ryan Bey, Senior Environmental Scientist, e-mail, November 29, 2023), the feature is not a water of the State, and no permits from the NCRWQCB are required.

Potential Introduction and Spread of Noxious Weeds

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

Soil import/export and use of certain erosion-control materials such as straw can also result in the spread of noxious weeds. As required by **MM 4.4.4**, the potential for introduction and spread of noxious weeds can be avoided/minimized by using only certified weed-free erosion control materials, mulch, and seed; limiting any import or export of fill material to material that is known to be weed free; and requiring the construction contractor to thoroughly wash all construction vehicles and equipment at a commercial wash facility before entering and upon leaving the job site. Implementation of **MM 4.4.4** reduces potential impacts related to the introduction and spread of noxious weeds to **a less-than-significant** level.

With implementation of **MM 4.4.3 and MM 4.4.4,** and use of BMPs for sediment control and spill prevention, potential impacts on sensitive natural communities would be ***less than significant.***

Question D

Project implementation would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, nor would it impede the use of native wildlife nursery sites. The study area contains no fish-bearing streams; therefore, the proposed project would not adversely affect fish movement.

CDFW identifies critical winter range for deer ~0.2 miles west of the disposal fields (CDFW, 2020). Due to the distance from the proposed improvements, the project would not impact the critical winter range. Native wildlife nursery sites are locations where native fish and wildlife gather for breeding and raising young. These areas may include spawning areas for fish, fawning areas for deer, and nesting rookeries for birds. There is no habitat for native or migratory fish located in the project site, and there are no identified fawning grounds in the study area.

Path: N:\companyfiles\01-Jobs Active\032-84 PACE - Yreka WWTP Improvements\13-Project GIS\3-Map Documents\Map Sessions\Biological\1 Montane Riparian Habitat - WWTP.aprx

All depictions are approximate. Not a survey product. 03.21.24

0 150 Feet

Figure 4.4-1

On-site Montane Riparian Habitat

ENPLAN

As discussed under Question A, trees, structures, and other vegetation on the project site could provide nesting habitat for birds. Implementation of **MM 4.4.2** (nesting bird protections) ensures that the project does not interfere with wildlife nursery sites for birds.

Daytime movements of deer and other terrestrial wildlife species may be temporarily affected during construction activities; however, wildlife species would be able to alter their routes to move around the construction area. There is a slight possibility that wildlife could be trapped in open trenches and pipes during construction. **MM 4.4.5** would prevent the inadvertent entrapment of wildlife. The proposed project would not introduce any new barriers to wildlife movement and there would be no long-term impacts.

Therefore, with implementation of **MM 4.4.2** and **MM 4.4.5**, the proposed project would have a ***less-than-significant*** impact on the movement of fish and wildlife species and would not significantly impact wildlife corridors or native wildlife nursery sites.

Question E

As identified under Regulatory Context, the City's General Plan includes goals, objectives, policies, and programs related to the conservation of natural resources. Implementation of **MM 4.4.1 through MM 4.4.5**, as well as BMPs for erosion and sediment control ensures consistency with local policies that protect biological resources. Therefore, impacts would be ***less than significant.***

Question F

A Habitat Conservation Plan (HCP) is a federal planning document that is prepared pursuant to Section 10 of the FESA when a project results in the "take" of threatened or endangered wildlife. Regional HCPs address the "take" of listed species at a broader scale to avoid the need for project-by-project permitting. A Natural Community Conservation Plan (NCCP) is a state planning document administered by CDFW. There are no HCPs, NCCPs, or other habitat conservation plans that apply to the proposed project (CDFW, 2024b). Therefore, there would be ***no impact***.

CUMULATIVE IMPACTS

Cumulative projects in the project vicinity, including growth resulting from build-out of the City of Yreka'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 4.4.5** would avoid, reduce, or mitigate potential impacts to special-status species and sensitive habitats. With these measures, the proposed project's contribution to cumulative regional impacts to biological resources would be less than significant.

MITIGATION

MM 4.4.1 The monarch butterfly is currently designated as a candidate species for federal listing under the Federal Endangered Species Act. If the western migratory population of the monarch butterfly remains a candidate or is formally designated as proposed, threatened, or endangered at the time of construction, the following measures shall be implemented as applicable:

a. A field survey shall be undertaken in early to mid-May (prior to arrival of the butterflies) to determine if milkweeds (*Asclepias* spp.) are present in or adjacent to the work area. If no milkweeds are present, no further action is required.

b. If milkweeds are present in or adjacent to the work area and can be avoided during construction, temporary high-visibility indicators such as marking whiskers, pin flags,

stakes with flagging tape, or other markers shall be established to protect the plants; the markers/flags shall be maintained in good condition throughout the duration of construction.

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

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

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

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

MM 4.4.2 In order to avoid impacts to nesting birds and raptors protected under the federal Migratory Bird Treaty Act (MBTA) 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 account for acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds.

   At a minimum, the survey report shall include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed in the area, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.).

   The results of the survey shall be submitted to the California Department of Fish and Wildlife (CDFW) upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or

suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

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

MM 4.4.3 Potential impacts to montane riparian habitat in the project site shall be avoided by installing high-visibility markers along the outer edges of the construction zone adjacent to montane riparian habitat at the wastewater treatment plant site. The high-visibility markers shall consist of marking whiskers, pin flags, stakes with flagging tape, or similar markers; marker locations shall be determined by a qualified biologist in consultation with the project engineer and the City of Yreka. No construction activities (e.g., clearing, grading, trenching, etc.), including vehicle parking and materials stockpiling, shall occur within the marked area. The exclusionary markers shall be periodically inspected during the construction period to ensure the markers are properly maintained. The markers shall be removed upon completion of work.

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

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

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

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

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

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

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4.5 CULTURAL RESOURCES

Would the project:

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

REGULATORY CONTEXT

FEDERAL

Section 106 of the National Historic Preservation Act (NHPA)

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

> *The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:*
>
> - *That are associated with events that have made a significant contribution to the broad patterns of our history;*
> - *That are associated with the lives of persons significant in our past;*
> - *That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
> - *That has yielded, or may be likely to yield, information important to prehistory or history.*

In addition to meeting at least one of the criteria outlined above, the property must also retain enough integrity to enable it to convey its historic significance. To retain integrity, a property will always possess several, and usually most, of the seven aspects of integrity:

- Location: the place where the historic property was constructed or the place where the historic event occurred.
- Design: the combination of elements that create the form, plan, space, structure, and style of a property.
- Setting: the physical environment of a historic property.
- Materials: the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

- Workmanship: the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- Feeling: a property's expression of the aesthetic or historic sense of a particular period of time.
- Association: the direct link between an important historic event or person and a historic property.

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP. If a site is determined to be an eligible or historic property, impacts are assessed in terms of "effects." An undertaking is considered to have an adverse effect if it results in any of the following:

1. Physical destruction or damage to all or part of the property;
2. Alteration of a property;
3. Removal of the property from its historic location;
4. Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
5. Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features; and
6. Neglect of a property that causes its deterioration; and
7. The transfer, lease, or sale of property out of federal ownership or control without restrictions or conditions to ensure long-term preservation of the property's historic significance.

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

STATE

California Environmental Quality Act (CEQA)

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

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

Resources must retain integrity to be eligible for listing on the CRHR. Resources that are listed in or formally determined eligible for listing in the NRHP are included in the CRHR, and thus are significant historical resources for the purposes of CEQA (PRC §5024.1(d)(1)). A unique archaeological resource means an artifact, object, or site that meets any of the following criteria:

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

LOCAL

City of Yreka

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

Land Use Element		
Goal	LU.12	To protect and preserve the historical resources of the City.
Objective	LU.11	Maintain the review process and application of standards for the preservation of the historic resources within the established historic district. Expand protection to other historic structures and archaeological resources that are located elsewhere in the community outside of the historic district.
Program	LU.12.A	An archaeological record search shall be required on all discretionary projects, on land not previously developed or approved for a parcel map or subdivision. This record shall be supplied by the applicant, to determine if there is the potential for archaeological resources on the project site. If the record search determines there is a high probability of such resources, an on-site investigation shall occur by a professional approved by the City.
	LU.12.B	If during the course of disturbance of a project site human remains are discovered, construction shall stop immediately, and such find reported to the County Coroner. Work on the site with the potential for disturbing such remains shall not occur until authorized by the Coroner.
	LU.12.C	The exterior modification or demolition of any building located outside of the Historic District which was constructed prior to 1910, shall not occur until it has been determined that such modification or demolition will not cause any significant impact to historic resources.

In addition, the General Plan provides the following definitions:

Heritage Trees: Trees planted by a group of citizens or by the City or County in commemoration of an event or in memory of a person figuring significantly in history.

Landmark Trees: Trees whose size, visual impact, or association with a historically significant structure or event have led the City or County to designate them as landmarks.

DISCUSSION OF IMPACTS

Questions A and B

A Cultural Resources Inventory (CRI) Report was completed for the proposed project by ENPLAN in January 2024. The study included a records search, Native American consultation, and field evaluation.

Area of Potential Effects (APE)

The APE boundaries were devised in consultation with PACE Engineering, Inc., based on the project design. The APE includes all areas in which improvements would occur, and areas for staging and temporary construction access.

The horizontal APE includes the entirety of the project sites as depicted in **Figures 1 through 4**. 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. It is anticipated that the maximum depth of excavation will not exceed 10 feet.

Records Search

A records search was conducted to identify previously conducted cultural resources surveys and recorded sites in the project area. The records search included review of records at the Northeast Information Center of the California Historical Resources Information System at California State University, Chico (NEIC/CHRIS); National Register of Historic Places (NRHP); California Register of Historical Resources (CRHR); California Inventory of Historic Resources; California Historical Landmarks; California Points of Historical Interest; Native American Heritage Commission (NAHC); and historical maps and aerial photographs.

Research at the NEIC/CHRIS was conducted on August 29, 2022, and covered an approximate 1/4-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 eleven cultural resources surveys have been conducted within a 1/4-mile radius of the project APE, two of which encompassed portions of the APE. Six cultural resource sites have previously been recorded in the search radius; however, none of the sites are within the project's APE.

Review of the NRHP, the CRHR, California Historical Landmarks, and California Points of Historical Interest did not identify any additional resources within the APE.

Native American Consultation

In response to ENPLAN's request, on October 28, 2022, the NAHC conducted a search of the Sacred Lands File; the search did not reveal any known Native American sacred sites or cultural resources in the project area. The NAHC also provided contact information for several Native American representatives and organizations, who were contacted by ENPLAN on July 26, 2023, with a request to provide comments on the proposed project.

Comment solicitation letters were sent by ENPLAN, to Russell Attebery, Tribal Chair, Karuk Tribe; Alex Watts-Tobin, Tribal Historic Preservation Officer (THPO), Karuk Tribe; Harold Bennett, Tribal Chair, Quartz Valley Indian Community; Sherry Smith, Tribal Administrator, Quartz Valley Indian Reservation; Les Anderson, Cultural and Heritage Department, Klamath Tribes; Robert Burkybile, Operations Manager, Modoc Tribe of Oklahoma; Troy LittleAxe, Assistant Tribal Administrator, Modoc Tribe of Oklahoma; Ken Sandusky, Resource and Development Director, Modoc Tribe of Oklahoma; Sami Jo Difuntorum, Cultural Resource Preservation Officer, Shasta Indian Nation; and Roy V. Hall Jr., Tribal Chair, Shasta Nation.

Follow-up correspondence was conducted on November 7 and 13, 2023. The Modoc Tribe of Oklahoma responded that they have no concerns with the proposed project. No comments were received from any of the other tribes that were contacted.

Fieldwork Evaluation

Archaeological fieldwork was completed by an ENPLAN archaeologist on June 6, 2023, to identify cultural resources that would be potentially affected by the proposed project. The entire APE was surveyed with transects spaced 20-30 meters apart, depending on the location. Areas with exposed

subsurface soil were thoroughly inspected for evidence of any possible buried cultural deposits and/or soil differentiation.

Conclusions

The cultural resources evaluation identified one historical-era resource within the APE: the City of Yreka WWTP. The WWTP was constructed in 1972 and was modified in 2001, 2003, 2007, 2014, and 2016. Due to the age of some of the existing facilities, the WWTP was evaluated within the context of the development of wastewater facilities in the U.S. and in California. Based on the evaluation, the WWTP does not meet any of the criteria for listing in the NRHP or CRHR (refer to discussion under Regulatory Context). An additional historical-era resource, the remains of the Old Highway 99 roadside rest stop, which dates to 1962, was identified adjacent to but outside the APE and would not be affected by project implementation.

However, there is always some potential for previously unknown cultural resources to be encountered during project excavation. Based on the geomorphological and topographic characteristics of the project area, the results of the records and literature search, Native American consultation, and the age of the soils mapped in the area, the project area has a low to moderate potential for intact surface and buried historical and prehistoric cultural resources. **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 project area have the potential to impact cultural resources. Archaeological and historic resources are afforded special legal protections designed to reduce the cumulative effects of development. Cumulative projects and the proposed project are subject to the protection of cultural resources afforded by CEQA Guidelines §15064.5 and related provisions of the PRC. In addition, projects with federal involvement would be subject to Section 106 of the NHPA.

Given the non-renewable nature of cultural resources, any impact to protected sites could be considered cumulatively considerable. As discussed above no known cultural resources would be impacted by the proposed project, and **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, City of Yreka staff 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 of Yreka shall comply with §15064.5 (e) (1) of the CEQA Guidelines and PRC §7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the County Coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the NAHC to identify the most likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed in §15064.5 (e) has been completed.

DOCUMENTATION

City of Yreka. 2003. City of Yreka General Plan Update, 2002-2022. http://www.ci.yreka.ca.us/DocumentCenter/View/119/General-Plan-PDF?bidId=. Accessed June 2023.

ENPLAN. 2024. Cultural Resources Inventory Report, City of Yreka Wastewater Treatment Plant Improvement Project. On file at NEIC/CHRIS.

4.6 ENERGY

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy deficiency?	☐	☐	☒	☐

REGULATORY CONTEXT

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

STATE

California Environmental Quality Act (CEQA)

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

Renewables Portfolio Standard

In 2002, Senate Bill (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 greenhouse gas (GHG) emission reduction planning component beginning January 1, 2019.

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

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

In-Use Off-Road Diesel-Fueled Fleets Regulation

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

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

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

California Building Standards Code

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

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

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

Warren-Alquist Act (1974)

The Warren-Alquist Act established the California Energy Resources Conservation and Development Commission (CEC) in 1974 to respond to the energy crisis of the early 1970s and the State's unsustainable growing demand for energy resources. The Act established State policy focused on reducing the wasteful, unnecessary, and uneconomical uses of energy by employing a range of measures. The Act is regularly updated, and the Energy Commission publishes an updated version of the Act annually (CEC, 2023).

DISCUSSION OF IMPACTS

Questions A and B

Construction-Related Energy Use

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

As stated under Regulatory Context, construction equipment must comply with the State's In-Use Off-Road Diesel-Fueled Fleets Regulation which 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. The requirement to use renewable diesel fuel in off-road diesel vehicles, will be phased in starting in 2024 through the end of 2036 (CARB, 2023; 2022a, 2022b). Therefore, impacts during construction would be ***less than significant***.

Operational Energy Use

Project components that would result in a permanent increase in energy use include the control building expansion and the new disinfection facility (i.e., chlorine contact basin or ultraviolet [UV] disinfection building), filtration building, sludge dewatering facility, and replacement lift station at the WWTP.

If UV disinfection is selected as the disinfection process, energy demand could be greater than for chlorine disinfection. The amount of energy used for a UV disinfection system depends on system design and the type of UV lamps used in the disinfection process. The amount of energy used for a chlorine disinfection facility depends on the chlorine dose delivered.

According to the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy (U.S. Department of Energy, 2021), WWTPs using low-pressure UV lamps consume an average of 100 to 250 kilowatt hours (kWh) per million gallons (MG) of wastewater treated. Medium-pressure systems require 460 to 560 kWh/MG.

Chlorinated disinfection systems use 60-250 kWh/MG, which is comparable to a UV system using low-pressure lamps. If medium-pressure lamps are used, energy use could be significantly greater than the amount of energy used for a chlorine disinfection system. However, the project must comply with the CBSC, CEC, CALGreen, and other applicable State building codes related to energy efficiency.

Furthermore, old inefficient pumps, motors, controls, and other miscellaneous equipment at the WWTP and disposal fields would be replaced with National Electrical Manufacturers Association (NEMA) premium motors and energy-efficient equipment, resulting in a corresponding decrease in energy use. The installation of SCADA systems at four of the City's lift stations will allow for remote operation, resulting in a reduction in trips by the City's WWTP operators to the lift stations. In addition, as stated under Regulatory Context, the new standards established by SB 100 (2018) require 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045 for both investor-owned and publicly owned utilities.

Therefore, energy used for operation of the proposed project would not be considered wasteful, inefficient, or unnecessary; impacts would be ***less than significant***.

CUMULATIVE IMPACTS

Completion of the proposed project and other potential cumulative projects in the region, including growth resulting from build-out of the City's General Plan, could result in 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. Compliance with State regulations, the reduction in vehicle trips that would occur with installation of SCADA equipment at the City's lift stations, and replacement of old inefficient pumps, motors, and equipment with new, energy-efficient pumps, motors, and equipment, ensures that the proposed project's cumulative impacts on energy resources would be less than significant.

MITIGATION

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

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

Paleontological Resources Preservation Act

The federal Paleontological Resources Preservation Act of 2002 limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained federal

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

STATE

California Alquist-Priolo Earthquake Fault Zoning Act

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

California Seismic Hazards Mapping Act

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

California Building Standards Code (CBSC)

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

Protection of Paleontological Resources

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

LOCAL

City of Yreka

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

Public Health and Safety Element		
Goal	PH.5	Minimize the threat of personal injury and property damage due to seismic and geologic hazards.
Objective	PH.5	Ensure that adequate review and analysis for any development takes these factors into account and presents findings and reports designed to support the new development.
Program	PH.5.A	The City may require a soils report, prepared by a licensed soils engineer, for development projects within areas of identified soils limitations. Soils reports shall evaluate shrink/swell and liquefaction potential of sites and recommend measures to minimize unstable soil hazards.

DISCUSSION OF IMPACTS

Question A

i and ii)

According to the Department of Conservation's (DOC'S) Alquist-Priolo Earthquake Fault Zone Map, there are no Alquist-Priolo Special Study Zones in the project area. The nearest Special Study Zone is the Cedar Mountain Fault Zone, ~29 miles east of the project site (DOC, 2024). The California Department of Conservation Fault Activity Map of California shows that the closest potentially active fault is the Yellow Butte Fault located ~17 miles southeast of the project area (DOC, 2022a). Although these fault lines could produce low to moderate ground shaking, earthquake activity has not been a serious hazard in the County's history (Siskiyou County, 1975).

The project does not include any components that would increase the likelihood of a seismic event or increase the exposure of people or structures to risks associated with a seismic event. Further, plans would be prepared and approved by a registered professional engineer to ensure the project is designed to withstand seismic activity. Therefore, impacts would be ***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.

As shown in **Table 4.7-1**, due to soil type, it is possible that liquefaction could occur in some areas. As required by **MM 4.7.1**, a geotechnical study will be completed to evaluate the surface and subsurface soil conditions at the project site and identify geotechnical criteria for site excavations, design of foundations, installation of drainage facilities, and other related improvements. The study will include site reconnaissance, drilling and logging of exploratory borings, sampling of the subsurface soils, and laboratory testing of the soil samples.

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

TABLE 4.7-1
Soil Type and Characteristics

Location / Acreage	Soil Name	Landform and Parent Material	Erosion Potential	Drainage	Surface Runoff	Permeability	Shrink-Swell Potential
Disposal Fields and WWTP 42.5 acres	Dumps[1]	Flood plains; igneous, metamorphic, and sedimentary rock	High	Excessively drained	Not rated	Not rated	Not rated
LS 1 0.2 acres	Salisbury gravelly clay loam, 0 to 5 percent slopes	Terraces; alluvium derived from igneous, metamorphic, and sedimentary rock	Slight	Well-drained	Slow	Slow	Moderate

Location / Acreage	Soil Name	Landform and Parent Material	Erosion Potential	Drainage	Surface Runoff	Permeability	Shrink-Swell Potential
LS 2 0.2 acres	Salisbury clay loam, 2 to 9 percent slopes	Terraces; alluvium derived from igneous, metamorphic, and sedimentary rock	Moderate	Well-drained	Medium	Slow	Moderate
LS 3 & 4 0.4 acres	Hilt sandy loam, 2 to 15 percent slopes	Hills; residuum weathered from sandstone	Moderate	Well-drained	Medium	Moderately Slow	Moderate

Sources: U.S. Department of Agriculture, Natural Resources Conservation Service, 2022; U.S. Department of Agriculture, Soil Survey of Siskiyou County, California, Central Part 1, 1983.
1. Dumps is waste rock from dredging operations, making its soil properties variable depending on the location.

iv)

A landslide is a mass of rock, earth or debris moving down a slope. Landslides are most likely to occur in steep areas with weak rocks where the soil is saturated from heavy rains or snowmelt. The Landslide Susceptibility Map included in the Draft 2018 Siskiyou County Local Hazard Mitigation Plan indicates that areas in which improvements are proposed have a low susceptibility for landslide hazards (Siskiyou County, 2018a). Earthwork that alters the shape of a slope or imposes new loads on an existing slope could increase the potential for landslides. However, the project site is relatively flat with little risk of landslides. Therefore, potential impacts would be ***less than significant***.

Question B

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

As noted in Section 1.7 (Regulatory Requirements), the City is required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) permit for *Discharges of Storm Water Runoff Associated with Construction Activity* by submitting a Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB). The permitting process requires the development and implementation of an effective Stormwater Pollution Protection Plan (SWPPP) that includes Best Management Practices (BMPs) to reduce pollutants as well as any additional controls necessary to meet water quality standards. Measures that may be implemented to minimize erosion include, but are not limited to, limiting construction to the dry season; use of straw wattles, silt fences, and/or gravel berms to prevent sediment from discharging off-site; and revegetating temporarily disturbed sites upon completion of construction. Because BMPs for erosion and sediment control would be implemented in accordance with existing requirements, the potential for soil erosion and loss of top soil would be ***less than significant***.

Questions C and D

See discussion under Question A (iii) and (iv) and Question B above. Unstable soils consist of loose or soft deposits of sands, silts, and clays. When soils are unstable, they can shift or expand and damage structures and/or underground utilities. Expansive soils generally contain clays that swell when they absorb water and shrink when they dry out. When expansive soils swell, the change in volume can exert pressure on loads that are upon them.

As shown in **Table 4.7-1**, the majority of improvements would be constructed in areas with "Dumps" soil types. The NRCS does not provide ratings for shrink-swell potential for this soil type because the characteristics of Dumps soils can vary extensively based on location. In the project area, the Dumps soil contains waste rock, mainly gravel, cobbles, and stone-sized rock fragments from dredging

operations that occurred as early as 1899; the 1955 USGS Hornbrook, CA topographic quadrangle map shows extensive rows of tailing piles in the area of the disposal fields.

As stated under Question A iii), **MM 4.7.1** requires that a geotechnical report be prepared to evaluate soil conditions at the project site and identify geotechnical criteria for site excavations, design of foundations, installation of drainage facilities, and other related improvements. The study will identify any expansive and/or unstable geologic units or soils in the project site and provide recommendations to minimize potential impacts.

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

Question E

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

Question F

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

A review of U.C. Berkeley Museum of Paleontology (UCMP) records showed that 125 paleontological resources sites have been discovered in Siskiyou County (UCMP, 2023a). Within these sites, 121 fossils have been recorded in the County (UCMP, 2023b); however, specific locations of these specimens are not disclosed.

According to the DOC, the geology of the project area consists of Paleozoic era marine sedimentary and metasedimentary deposits (DOC, 2022b). Because paleontological resources and fossils are found primarily within sedimentary rock deposits, fossilized paleontological resources may be present in the project area. Although the majority of work associated with project improvements would be conducted in previously disturbed areas, **MM 4.7.3** is included to address the inadvertent discovery of paleontological resources during ground-disturbing activities. Therefore, impacts would be ***less than significant***.

CUMULATIVE IMPACTS

Completion of the proposed project and other potential cumulative projects in the region, including growth resulting from build-out of the City's General Plan, could result in increased erosion and soil hazards and could expose additional structures and people to seismic hazards. In addition, ground disturbance has the potential to destroy paleontological resources and unique geological features.

As discussed above, all development projects in the State that result in earth disturbance over one acre are required to obtain coverage under the NPDES permit for *Discharges of Storm Water Runoff Associated with Construction Activity* by submitting a Notice of Intent to the SWRCB along with an effective SWPPP that includes BMPs to minimize erosion. Implementation of BMPs in accordance with the SWPPP, and implementation of **MM 4.7.1, MM 4.7.2,** and **MM 4.7.3** ensures that the project's impacts associated with geology and soils are not cumulatively considerable.

MITIGATION

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

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

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

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

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

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4.8 GREENHOUSE GAS EMISSIONS

Would the project:

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

REGULATORY CONTEXT

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

FEDERAL

U.S. Environmental Protection Agency (USEPA)

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

STATE

California Executive Order (EO) S-3-05

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

Assembly Bill 32 (Global Warming Solutions Act of 2006)

As required by Assembly Bill (AB) 32 (2006), California Air Resources Board (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. EO B-30-15 (2015) extended the goal of AB 32 and set a GHG reduction goal of 40 percent below 1990 levels by 2030. In December 2017, CARB adopted the second update to the Scoping Plan that includes strategies to achieve the 2030 mid-term target and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

The 2017 Scoping Plan Update recommends that local governments aim to achieve a community-wide goal of no more than 6 metric tons (MT) CO_2 equivalent (CO_2e) per capita by 2030 and no more than 2 MT CO_2e per capita by 2050, which is consistent with the State's long-term goals.

California Executive Order B-55-18

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

2022 Scoping Plan for Achieving Carbon Neutrality

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

Senate Bill 32/Assembly Bill 197 (2016)

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

Renewables Portfolio Standard

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

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

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

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

In-Use Off-Road Diesel-Fueled Fleets Regulation

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

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

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

CEQA Guidelines

§15064.4 of the 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); see also id., §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)	CO_2 is the primary GHG emitted through human activities. In 2014, CO_2 accounted for about 80.9 percent of all U.S. GHG emissions from human activities. The main human activity that emits CO_2 is the combustion of fossil fuels (coal, natural gas, and oil) for energy and transportation, although certain industrial processes and land-use changes also emit CO_2.
Methane (CH_4)	CH_4 is the second most prevalent GHG emitted in the U.S. from human activities. Methane is emitted by natural sources such as wetlands, as well as human activities such as the raising of livestock; the production, refinement, transportation, and storage of natural gas; methane in landfills as waste decomposes; and in the treatment of wastewater.
Nitrous oxide (N_2O)	In 2014, N_2O accounted for about 6 percent of all U.S. GHG emissions from human activities. Nitrous oxide is naturally present in the atmosphere as part of the Earth's nitrogen cycle. Human activities such as agricultural soil management (adding nitrogen to soil through use of synthetic fertilizers), fossil fuel combustion, wastewater management, and industrial processes are also increasing the amount of N_2O in the atmosphere.
Hydrofluorocarbons (HFCs)	HFCs are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products such as refrigerants, aerosol propellants, solvents, and fire retardants. They are released into the atmosphere through leaks, servicing, and disposal of equipment in which they are used.
Perfluorocarbons (PFCs)	PFCs are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F_4). Perfluorocarbons are produced as a byproduct of various industrial processes associated with aluminum production and the manufacturing of semiconductors.
Sulfur hexafluoride (SF_6)	SF_6 is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used in magnesium processing and as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF_6 produced worldwide.
Nitrogen trifluoride (NF_3)	Nitrogen trifluoride is a colorless, odorless, nonflammable gas that is highly toxic by inhalation. It is one of several gases used in the manufacture of liquid crystal flat-panel displays, thin-film photovoltaic cells and microcircuits.

Source: U.S. Environmental Protection Agency, 2024.

DISCUSSION OF IMPACTS

Question A

Gases that trap heat in the atmosphere create a greenhouse effect that results in global warming and climate change. These gases are referred to as 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. GWPs are updated periodically with improvements to the underlying science.

Gases with a higher GWP absorb more heat than gases with a lower GWP, and thus have a greater effect on global warming and climate change. The GWP metric is used to convert all GHGs into CO_2e units, which allows policy makers to compare impacts of GHG emissions on an equal basis. The GWPs and atmospheric lifetimes for each GHG are shown in **Table 4.8-2**.

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

GHG	GWP (100-year time horizon)	Atmospheric Lifetime (years)
CO_2	1	*
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: Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (CARB, n.d.).

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

Thresholds of Significance

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

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

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

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

emissions and 10,000 MT/year CO_2e for stationary sources (various communities in the Sacramento Valley and Northeast Plateau air basins). 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.2022.1.1.22 software. Output files, including all site-specific inputs and assumptions, are provided in **Appendix A**. CalEEMod is a statewide model designed to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

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

- Emissions from construction are based on all construction-related activities associated with proposed and future uses, including but not limited to grading, site preparation, application of architectural coatings, use of construction equipment, material hauling, trenching, and paving.
- The increase in operational emissions would be due to the addition of electricity consumption to operate the new and expanded facilities at the WWTP and disposal fields.
- Total land disturbance would be approximately 1.5 acres; 3,000 cubic yards (CY) of fill material would be imported and 400 CY would be exported.
- The total area receiving architectural coatings would be 13,648 square feet.
- Demolition activities would generate approximately 300 tons of solid waste.
- The total area to be paved/repaved would be 0.18 acres.
- The project would implement standard mitigation measures.
- For purposes of the CalEEMod analysis, it was assumed that construction would start in the spring of 2026 and be completed by the end of 2027 (the actual construction start date will depend on funding availability).

Construction Emissions

Construction of the proposed project would emit GHG emissions as shown in **Table 4.8-3**, primarily from the combustion of diesel fuel in heavy equipment.

TABLE 4.8-3
Estimated Construction-Related Greenhouse Gas Emissions

Total Construction Emissions (Metric Tons)					
Year	**Carbon Dioxide (CO_2)**	**Methane (CH_4)**	**Nitrous Oxide (N_2O)**	**Refrigerants**	**Carbon Dioxide Equivalent (CO_2e)**
2026	195	0.01	< 0.005	0.02	197
2027	158	0.01	< 0.005	0.01	158
Total	**353**	**0.02**	**0.01**	**0.03**	**355**

Source: CalEEMod, 2024

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

Operational Emissions

Table 4.8-4 shows the estimated highest daily levels of operational emissions by source. For the proposed project, mobile sources include on-road motor vehicles and off-road engines and equipment used for maintenance activities. Area sources include consumer products and architectural coatings. Energy sources include electricity generated from fossil fuels (indirect emissions) that are used to operate pumps, motors, etc. The project would not increase GHGs over existing levels due to water use or solid waste generation associated with the project. Refrigerants include those used in building cooling systems. No new stationary sources are being proposed that would contribute to operational emissions. Construction emissions are amortized over a 30-year period, which is considered the minimum service life for the project, and added to the operational emissions.

TABLE 4.8-4
Estimated Annual Operational Greenhouse Gas Emissions

Total Emissions (Metric Tons)					
Source	**Carbon Dioxide (CO_2)**	**Methane (CH_4)**	**Nitrous Oxide (N_2O)**	**Refrigerants**	**Carbon Dioxide Equivalent (CO_2e)**
Mobile	35.1	< 0.005	< 0.005	0.05	35.8
Area	0.1	< 0.005	< 0.005	0	0.1
Energy	29.5	< 0.005	< 0.005	0	29.6
Water	3.07	0.05	< 0.005	0	4.73
Solid Waste	0.76	0.08	0	0	2.64
Refrigerants	0	0	0	0.29	0.29
Amortized Construction Emissions	11.76	< 0.005	< 0.005	< 0.005	11.83
Total	**80.29**	**0.14**	**0.02**	**0.34**	**84.99**

Source: CalEEMod, 2024.
Note: Totals may not add due to CalEEMod calculation factors and/or rounding.

As indicated in **Table 4.8-4,** the highest levels of CO_2 emissions are anticipated to be from mobile sources (e.g., employee and maintenance vehicles) and indirect emissions associated with the generation of electricity from fossil fuels.

As stated in Section 4.6 (Energy), chlorinated disinfection systems use 60-250 kWh/MG, which is comparable to a UV system using low-pressure lamps. If medium-pressure lamps are used, energy use could be significantly greater than the amount of energy used for a chlorine disinfection system. However, the project must comply with the CBSC, CEC, CALGreen, and other applicable State building codes related to energy efficiency.

In addition, old inefficient pumps, motors, controls, and other miscellaneous equipment at the WWTP and disposal fields would be replaced with National Electrical Manufacturers Association (NEMA) premium motors and energy-efficient equipment, resulting in a corresponding decrease in energy use. The installation of SCADA systems at four of the City's lift stations will allow for remote operation, resulting in a reduction in trips by the City's WWTP operators to the lift stations. In addition, as stated under Regulatory Context, the new standards established by SB 100 (2018) require 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045 for both investor-owned and publicly owned utilities.

The project's operational GHG emissions would not exceed the referenced numerical threshold of 900 MT/year CO2e.

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

Question B

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

MITIGATION

None necessary.

DOCUMENTATION

California Air Resources Board. 2023. Off-Road Diesel Regulation: Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation (Rulemaking Website). https://ww2.arb.ca.gov/rulemaking/2022/off-roaddiesel. Accessed June 2024.

_____. 2022a. AB 32 Climate Change Scoping Plan Website. https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan. Accessed June 2024.

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California Governor's Office of Planning and Research. 2018. Discussion Draft: CEQA and Climate Change Advisory. http://opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Adivsory.pdf. Accessed June 2024.

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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 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 of hazardous wastes, including generation, transportation, treatment, storage, and disposal. The U.S. Environmental Protection Agency (USEPA) has primary responsibility for implementing the RCRA.

USEPA’s Risk Management Plan

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

Federal Occupational Safety and Health Administration (OSHA)

OSHA prepares and enforces occupational health and safety regulations with the goal of providing employees with a safe working environment. OSHA regulations apply to the workplace and cover activities ranging from confined space entry to toxic chemical exposure.

U.S. Department of Transportation (USDOT)

The USDOT 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 (DTSC)

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

California Occupational Safety and Health Administration (Cal/OSHA)

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

Regional Water Quality Control Board (RWQCB)

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

Hazardous Materials Emergency Response/Contingency Plan

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

California Accidental Release Prevention Program (CalARP)

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

LOCAL

City of Yreka

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

Public Health and Safety Element		
Goal	PH.3	Protect people and property within the City of Yreka against fire related loss and damage.
Objective	PH.3	The objective of this goal is to reduce the fire hazard to the City.
Programs	PH.3.A	Maintain current levels of service for fire protection by continuing to require development projects to provide for and/or fund fire protection facilities, personnel, and operations and maintenance.
	PH.3.B	Require all new development projects to design public facility improvements that ensure that water volume and hydrant spacing are adequate to support efficient and effective fire suppression.
	PH.3.E	Enforce the requirements of Public Resources Code Sections 4290 and 4291 on all development projects. This includes, but is not limited to, the following: • Maintain roofs of structures free of vegetative growth. • Remove any portion of trees growing within ten feet of chimney/stovepipe outlets. • Maintain screens over chimney/stovepipe outlets or other devices that burn any solid or liquid fuel.
Goal	PH.6	Minimize the risk of personal injury, property damage, and environmental degradation resulting from the use, transport, disposal, and release/discharge of hazardous materials.
Objective	PH.6	Provide the City with policy support for the existing close cooperation between the City and the County to ensure that hazardous materials are handled and addressed properly in the event of an accidental spill.
Programs	PH.6.C	All permits for new projects or major additions to existing uses located on sites identified by the State as having or containing likely hazardous substances or materials shall be reviewed by the Siskiyou County Health Department for compliance with applicable State and local regulations.
	PH.6.D	The transport of all hazardous substances and materials shall not be permitted on local streets and highways without the approval of the applicable State agency having permit issuing authority for such material transportation.
	PH.6.E	Any use or manufacture of hazardous substances within one-quarter mile of any existing or proposed school, shall only be permitted when authorized by a conditional use permit, with ample assurances that the students will not be placed in a hazardous environment.

PH.6.F	As a means to address possible wildfire hazards on all discretionary projects on the periphery of the City, such applications shall be submitted to the California Department of Forestry for recommendations and suggested mitigation measures to be added to project approvals.
PH.6.G	All permits for new projects or major additions to existing uses that have the potential for using or containing hazardous substances or materials shall be reviewed by the Siskiyou County Health Department for compliance with applicable State and local regulations.

DISCUSSION OF IMPACTS

Question A

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

Question B

As discussed under Section 4.3 (Air Quality), Question C, due to the age of structures proposed for demolition/renovation at the WWTP, asbestos-containing materials and/or lead based paint may be present. Renovation activities could release airborne lead or asbestos particles, which may affect construction workers, visitors to the site, and persons occupying areas adjacent to the site.

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. **Mitigation Measures MM 4.3.2** and **MM 4.3.3** ensure the proper sampling, handling, and disposal of materials containing asbestos and/or lead-based paint.

Compliance with federal and State regulations and implementation of **MM 4.3.2 and MM 4.3.3**, would reduce impacts associated with the potential release of hazardous materials into the environment to a ***less-than-significant*** level.

Question C

According to the Siskiyou County Office of Education, the school nearest to the project site is Yreka High School, a public school on N. Oregon Street, ~0.15 miles southwest of the WWTP site.

As described in Section 4.3 (Air Quality) under Questions C and D and under Questions A and B above, construction activities would involve the use of relatively small quantities of hazardous substances such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, and may involve handling and removal of asbestos- and lead-containing materials. However, existing State standards govern the removal, handling, use, transport, and/or disposal of hazardous materials, and mitigation measures are included to avoid/minimize potential risks associated with hazardous substances. Therefore, impacts would be ***less than significant***.

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 (California Environmental Protection Agency, n.d.):

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

Review of the above records shows that the nearest active clean-up sites are the Old Coal Gas Plant located on East Lennox Street, ~0.5 south of the WWTP. Due to the distance between the project site and the clean-up site, there would be ***no impact***.

Question E

According to the Siskiyou County General Plan, the project area is not located within an airport land use plan. The nearest public airport to the project site is the Montague Airport-Yreka Rohrer Field, located ~2.8 miles east of the lift stations and ~4.5 miles east of the WWTP and disposal fields. According to the Federal Aviation Administration (FAA), the project site is not located in the vicinity of a private airstrip. Therefore, there would be ***no impact***.

Question F

The City of Yreka is located in the operational area of the Siskiyou County Office of Emergency Services (SCOES). A standard emergency management system (SEMS) program is in place between the City and SCOES. A local emergency plan guides local response to emergencies and local emergency management is conducted under the direction of the City of Yreka Police Department (City of Yreka, 2003). The major evacuation routes for the City are Interstate 5, State Route 3/Main Street, State Route 263 and East Oberlin Road.

The proposed project does not include work in the public road right-of-way (ROW) that would impede traffic and does not involve a use or activity that would impair implementation of or physically interfere with emergency response or emergency evacuation plans. Therefore, there would be ***no impact***.

Question G

The project does not include any components that would increase the potential for exposure of people or structures to wildfire risks in the long term. Equipment used during construction activities may create sparks that could ignite dry grass, and the use of power tools and/or acetylene torches may increase the risk of wildland fires. In accordance with Cal/OSHA regulations (Division 1, Chapter 4, Subchapter 4, Article 36 (Fire Protection and Prevention), a fire protection program must be followed throughout all phases of construction. The contractor is responsible for providing firefighting equipment and maintaining unobstructed access to all available firefighting equipment at all times. Implementation of the fire protection program ensures that the potential for impacts associated with wildland fires is ***less than significant.***

CUMULATIVE IMPACTS

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

MITIGATION

Implementation of **MM 4.3.2** and **MM 4.3.3**.

DOCUMENTATION

California Environmental Protection Agency. n.d. Cortese List Data Resources. https://calepa.ca.gov/sitecleanup/corteselist/. Accessed June 2023.

CAL FIRE. 2023. Fire Hazard Severity Zone Viewer. https://egis.fire.ca.gov/FHSZ/. Accessed June 2023.

City of Yreka. 2003. City of Yreka General Plan. http://www.ci.yreka.ca.us/DocumentCenter/View/119/General-Plan-PDF?bidId=. Accessed June 2023.

Federal Aviation Administration. 2022. Airport Data and Information Portal (ADIP). https://adip.faa.gov/agis/public/#/public. Accessed June 2023.

Siskiyou County Office of Education. 2023. Siskiyou County Schools. https://www.siskiyoucoe.net/schools. Accessed June 2023.

4.10 HYDROLOGY AND WATER QUALITY

Would the project:

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

REGULATORY CONTEXT

FEDERAL

Clean Water Act (CWA)

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

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

4. Section 404, jointly administered by the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (USEPA), establishes a permit program for the discharge of dredged or fill material into waters of the U.S.

Federal Anti-Degradation Policy

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

Safe Drinking Water Act

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

Federal Emergency Management Agency (FEMA)

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

National Pollutant Discharge Elimination System (NPDES)

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

STATE

Porter-Cologne Water Quality Control Act

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

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 Pollutant Discharge Elimination System (NPDES)

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

Construction Activity and Post-Construction Requirements

Discharges from construction sites that disturb one acre or more of total land area are subject to the NPDES permit for *Discharges of Storm Water Runoff associated with Construction Activity* (currently Order No. 2022-0057-DWQ, 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 Best Management Practices (BMPs) to reduce pollutants and any more stringent controls necessary to meet water quality standards. Dischargers must also comply with water quality objectives as defined in the applicable Basin Plan. If Basin Plan objectives are exceeded, corrective measures are required.

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

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

Dewatering Activities (Discharges to Surface Waters and Storm Drains)

Construction dewatering activities that involve the direct discharge of relatively pollutant-free wastewater that poses little or no threat to the water quality of waters of the U.S. are subject to the provisions of the North Coast Regional Water Quality Control Board (NCRWQCB) Order R1-2021-0016 (WDID 1A84073OSIS), *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. The City may be required to obtain coverage under this order, which would be initiated by submitting an NOI to the NCRWQCB.

Dewatering Activities (Discharges to Land)

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

WDRs for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4) (Water Quality Order 2013-0001-DWQ, as amended).

On April 30, 2003, the SWRCB adopted *WDRs for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Phase II MS4s).* A municipal separate storm sewer is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains. The Phase II MS4 General Order is intended to minimize adverse impacts associated with stormwater runoff.

Water Quality Control Plans (Basin Plans)

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

Sustainable Groundwater Management Act (SGMA)

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

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 Yreka General Plan

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

Conservation, Open Space, Parks and Recreation Element		
Goal	CO.6	Protect the quantity of community water supplies and avoid degradation of water quality.
Objective	CO.6	Ensure that erosion control measures are considered early in the construction process and ensure that water quality impacts resulting from discharges into drainage channels are minimized.
Programs	CO.6.B	Require applicants for new development projects to identify specific measures for minimizing project-related erosion and resulting siltation of drainage channels. Where such action may result in significant erosion or siltation in channels of the Yreka Creek drainage basin, such erosion control measures must be consistent with National Marine Fisheries Service conservation and minimization requirements as a means to minimize impacts on Coho salmon.
Public Health and Safety Element		
Goal	PH.2	Minimize the risk of personal injury and property damage resulting from flooding.
Objective	PH.2	Ensure the City's flood danger and protection policies are clearly enumerated and provide support for the relevant ordinances that regulate development in and around a flood zone.
Programs	PH.2.B	New development shall not be approved in areas which are subject to flooding without prior review and approval of plans for improvements which provide a minimum flood protection level equal to the 100-year storm event.
	PH.2.C	Development of structures must be in compliance with FEMA standards. All 100-year flood hazards must be completely mitigated through proper design.
	PH.2.E	Provide adequate storm drainage improvements to prevent flooding in areas that are prone to flood hazards.

Public Facilities Element		
Goal	PF.5	Provide for the collection, transport, and discharge of stormwater in a safe manner and protect people and property from flooding.
Objective	PF.5	Ensure that new development does not increase the natural flooding through inappropriate storm drainage design and to ensure that the quality of water than enters the natural waterways is not significantly degraded as a result of the urban development.
Programs	PF.5.A	Restrict development in areas where significant drainage and flooding problems are known to exist until adequate drainage and/or flood control facilities can be provided.
	PF.5.B	New development shall provide flood retention facilities to avoid increasing peak storm runoff in drainage channels.
	PF.5.G	To the extent feasible, all natural drainages should be protected and may be incorporated into the City drainage system. Vegetation along the drainages should be managed effectively to allow as much of the vegetation as possible to remain as habitat and filtration, while not impeding the drainage's role in preventing localized flooding.

City of Yreka Municipal Code Chapter 12.40 (*Stormwater Quality Management and Discharge Control Ordinance*)

The City of Yreka Municipal Code Chapter 12.40 was adopted to protect and enhance the water quality of watercourses, water bodies, and wetlands and ensure compliance with the Federal CWA and Porter-Cologne Water Quality Control Act. Chapter 12.40 also provides the City with the legal authority to fully implement and enforce provisions set under NPDES General Permit CAS000004, *Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4)* (Water Quality Order 2013-0001-DWQ, as amended).

DISCUSSION OF IMPACTS

Question A

The discharge of wastewater from the WWTP is regulated by the SWRCB under WDR Order No. R1-2021-0016 (WDID No. 1A84073OSIS). The Order establishes discharge prohibitions, effluent limitations, receiving water limitations, monitoring requirements, and a requirement for the continued assessment of whether discharges are affecting groundwater quality. These provisions ensure that the discharge does not result in exceedances of water quality standards and protect beneficial uses of groundwater and surface waters within the Shasta Valley Hydrologic Area. As stated under Section 3.0, Project Description, the purpose of the proposed project is to replace aging infrastructure, improve the treatment process, and increase efficiency of the WWTP. Proposed improvements would ensure that the City maintains compliance with the WDR Order for the WWTP.

The proposed project has the potential to temporarily degrade water quality due to increased erosion during project construction; however, as discussed under Regulatory Context above and in Section 4.7 (Geology and Soils) under Question B, the SWRCB Construction General Permit requires implementation of an effective SWPPP that includes BMPs to control construction-related erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat.

In addition, the City of Yreka is a Regulated Small MS4 and must comply with provisions of the Phase II MS4 General Order. Under the Phase II MS4 permit, the City must ensure that development projects incorporate measures to reduce stormwater runoff both during construction and post-construction to minimize the potential for long-term impacts. These requirements are specified in the City's Municipal Code Chapter 13.36 (*Storm Water Quality Management and Discharge Control Ordinanc*e).

If dewatering is required during construction, the project would be subject to a NCRWQCB General Order that includes specific requirements for monitoring, reporting, and implementing BMPs for construction dewatering activities.

Because construction and post-construction BMPs for erosion and sediment control would be implemented in accordance with the SWRCB Construction General Permit and MS4 permit, the project would not violate any water quality standards or WDRs or significantly degrade surface or groundwater quality. Impacts would be ***less than significant.***

Question B

The proposed project would not require new groundwater supplies for construction or operation. New impervious surfaces associated with the proposed project include the new disinfection facility, new filtration building, expanded existing control building, new package lift station, new sludge dewatering facility at the WWTP, and a new concrete masonry unit (CMU) building at the disposal fields. Construction of these improvements would result in an increase in impervious surface of ~0.16 acres.

The addition of impervious surface would decrease the area available for water penetration, thereby reducing local groundwater recharge potential. The project area is located in the Yreka Creek hydrologic unit, which totals ~32,763 acres (USEPA, 2022). The increase in impervious surface represents a very small percentage of the entire surface area of the hydrologic region. Runoff would be directed to areas with pervious surface, and the disposal fields and undeveloped land adjacent to the WWTP would continue to provide for groundwater recharge.

Therefore, as documented above, the project would not decrease groundwater supplies or interfere with groundwater recharge in a manner that would impede sustainable groundwater management of the basin. Impacts would be ***less than significant.***

Question C

As discussed under Question B, the project would add a negligible amount of new impervious surfacing at the WWTP and disposal fields. Improvement plans for the proposed project would be prepared by a licensed engineer to ensure that the improvements do not alter drainage patterns in the area in a manner that would result in increased surface runoff, flooding on- or off-site, or otherwise degrade water quality. As discussed under Question A, the City of Yreka is a Regulated Small MS4 and must comply with provisions of the Phase II MS4 General Order. Under the Phase II MS4 permit, the City must ensure that development projects incorporate measures to reduce stormwater runoff both during construction and post-construction to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect impacts from stormwater runoff (i.e., pollution and/or hydromodification) upstream or downstream.

Implementation of BMPs and post-construction measures ensures that the project would not alter drainage patterns in the area in a manner that would result in increased surface runoff, flooding on- or off-site, or otherwise degrade water quality. 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 over 80 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. There are no large, enclosed water bodies in proximity to the project and no risk of project inundation by a seiche. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (Panels 06093C1100D and 06093C1125D, effective January 18, 2011), work at the disposal fields would occur in the 100-year flood hazard zone (Zone AE) of Yreka Creek (see **Figure 4.10-1)**.

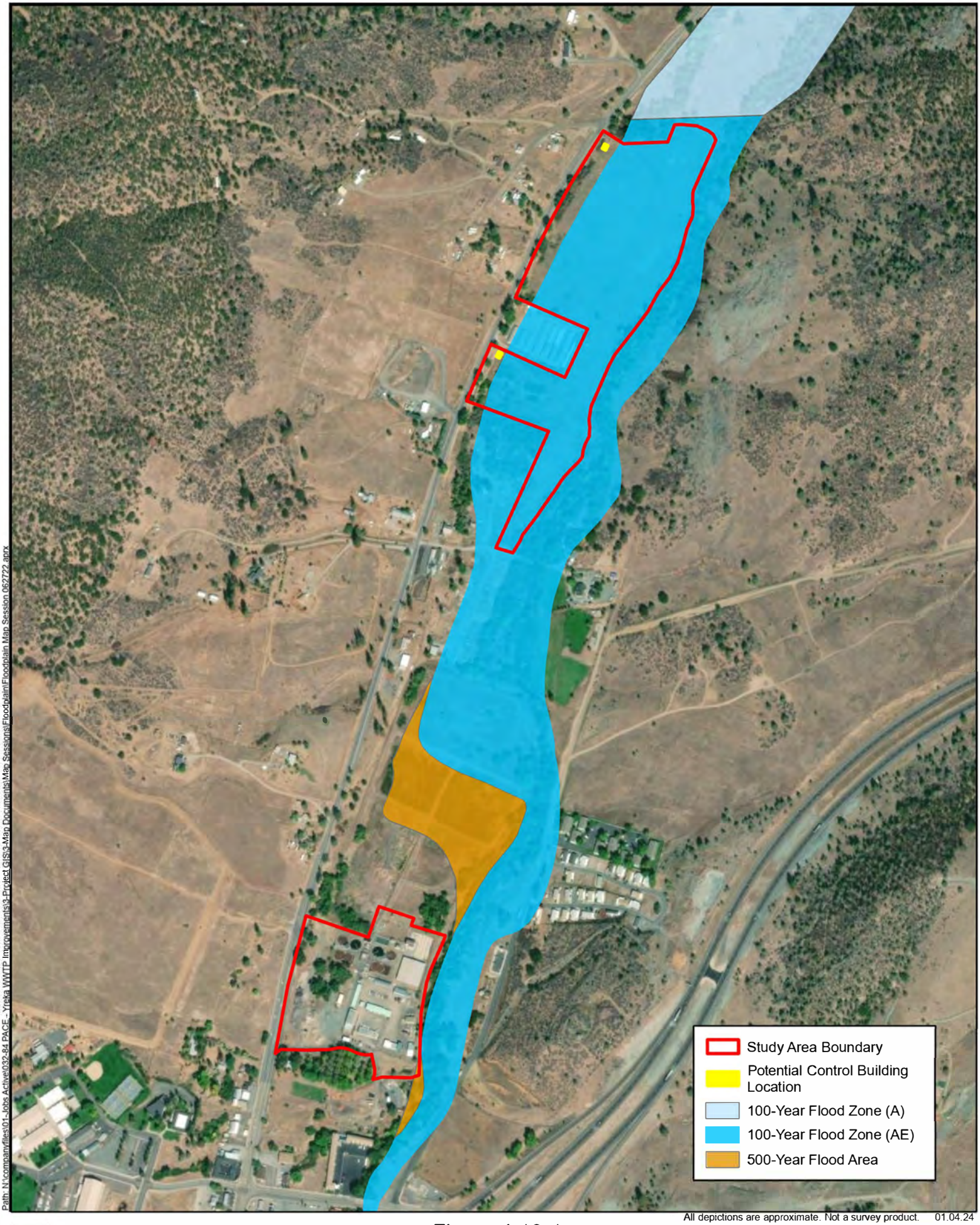


Figure 4.10-1

FEMA-Designated Flood Hazard Zones

ENPLAN

Improvements in the flood hazard zone include electrical conduit and pull boxes, moisture sensors, and control valves in the disposal field site. The improvements would be subsurface and would not increase the risk of release of pollutants due to project inundation by flood in the long-term. 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 in the floodplain; however, work would be conducted during the dry season when the risk of flooding is low. Therefore, the potential for impacts would be ***less than significant***.

Question E

As stated under Question A, the discharge of wastewater from the WWTP is regulated by the SWRCB under WDR Order No. R1-2021-0016, which establishes discharge prohibitions, effluent limitations, receiving water limitations, and monitoring requirements to ensure that the discharge does not degrade water quality.

During construction, a SWPPP that includes BMPs would be implemented to control construction-related erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat. In addition, the City must comply with provisions of the Phase II MS4 General Order both during construction and post-construction to minimize the potential for long-term impacts to water quality. Compliance with these regulations ensures that the project would not violate any water quality standards or WDRs; as such, the project would not obstruct implementation of a water quality control plan.

As discussed under Regulatory Context above, the SGMA established a framework for groundwater resources to be managed by local agencies in areas designated by the DWR as medium or high priority basins. The disposal field site and the LS 1 site are not located in a medium or high priority basin. The WWTP site and the LS 2, LS 3, and LS 4 sites are located within the Shasta Valley Groundwater Basin, which is designated as a medium priority basin (California Department of Water Resources, 2020). The GSA for the Shasta Valley Groundwater Basin is the Siskiyou County Flood Control and Water Conservation District (SCFCWCD). As required by the California SGMA, the SCFCWCD prepared a GSP for the Shasta Valley Groundwater Basin and adopted the GSP in January 2022 (SCFCWCD, n.d.).

The GSP identifies sustainable management criteria (SMC) to demonstrate avoidance of undesirable results for five sustainability indicators: chronic lowering of groundwater levels; reduction of groundwater storage; depletions of interconnected surface water; degraded groundwater quality; land subsidence; and seawater intrusion. Implementation of the GSP includes ongoing monitoring to ensure that necessary data are collected for each of the sustainability indicators. Annual reports, as well as five-year GSP Assessment Reports and GSP Periodic Evaluations and Assessments, must be submitted to the Department of Water Resources (DWR).

The proposed project would not have a significant impact on any of the sustainability indicators; therefore, the project would not conflict with or obstruct implementation of a sustainable groundwater management plan. Impacts would be ***less than significant***.

CUMULATIVE IMPACTS

Completion of the proposed project and other potential cumulative projects in the region could result in temporary 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, all development projects in the State that result in land disturbance of one acre or more are required to comply with the SWRCB General Construction NPDES permit for *Discharges of Storm Water Runoff Associated with Construction Activity* and implement an effective SWPPP which requires implementation of BMPs to reduce erosion, pollutants, and any additional controls necessary to meet water quality standards, as well as to avoid the creation of unstable slopes or filled areas that could adversely influence stormwater runoff. These regulations are intended to reduce the potential for

cumulative impacts to water quality. Compliance with existing City and resource agency requirements ensures that the proposed project's cumulative impacts to hydrology and water quality are less than significant.

MITIGATION

None necessary.

DOCUMENTATION

City of Yreka. 2024. City of Yreka Municipal Code. https://library.municode.com/ca/yreka/codes/code_of_ordinances?nodeId=TIT12WASE_CH12.40STQUMADICOOR. Accessed June 2024.

California Department of Water Resources. 2020. Basin Prioritization Dashboard, Sustainable Groundwater Management Act. https://gis.water.ca.gov/app/bp-dashboard/final/. Accessed June 2024.

Federal Emergency Management Agency. 2011. National Flood Hazard Map (Panels 06093C1100D and 06093C1125D effective January 18, 2011). https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed June 2024.

North Coast Regional Water Quality Control Board. 2021. Order R1-2021-0016 (WDID 1A84073OSIS), Waste Discharge Requirements for the City of Yreka Wastewater Treatment Facility, Siskiyou County. https://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2021/210016YrekaWDR.pdf. Accessed June 2024.

Siskiyou County Flood Control and Water District Groundwater Sustainability Agency. n.d.. Shasta Valley Groundwater Sustainability Plan. https://www.co.siskiyou.ca.us/naturalresources/page/sustainable-groundwater-management-act-sgma. Accessed June 2024.

State Water Resources Control Board. 2023. Phase II Small Municipal Separate Storm Sewer System (MS4) Program https://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.html. Accessed June 2024.

U.S. Environmental Protection Agency. 2022. Waters Geoviewer 2.0. https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=074cfede236341b6a1e03779c2bd0692. Accessed June 2024.

4.11 LAND USE AND PLANNING

Would the project:

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

REGULATORY CONTEXT

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

STATE

California Government Code (CGC)

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

CGC §65302(a) describes the required content of a land use element and states that the land use element must designate the proposed general distribution, general location, and extent of land uses for housing, businesses, industry, open space, recreational facilities, public facilities, areas subject to flooding, and other categories of public and private uses. The land use element assists in guiding decision-making related to zoning, subdivisions, and public works.

LOCAL

City of Yreka General Plan and Municipal Code

The City's General Plan includes goals, objectives, and programs that were adopted for the purpose of avoiding or minimizing environmental effects. The Yreka Municipal Code implements the City's General Plan. The purpose of the land use and planning provisions of the Code (Title 16, Zoning) is to provide for the orderly and efficient application of regulations and to implement and supplement related laws of the State of California. Title 19, Environmental Impact Procedure, includes a procedural framework for the implementation of 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 (i.e., result in a physical change that interrupts the cohesiveness of a neighborhood). The proposed project would not create a barrier for existing or planned development; therefore, there would be ***no impact***.

Question B

As discussed in each resource section of this Initial Study, the proposed project is generally consistent with applicable goals, objectives, policies, and implementation measures of the City's General Plan and regulations of the regulatory agencies identified in Section 1.7 of this Initial Study. Where necessary, mitigation measures are included to reduce impacts to less-than-significant levels. Therefore, with implementation of the Mitigation Measures identified in Section 1.10, the proposed project would not conflict with any plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect; impacts would be ***less than significant***.

CUMULATIVE IMPACTS

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

MITIGATION

Implementation of the Mitigation Measures identified in Section 1.10.

DOCUMENTATION

City of Yreka. 2003. City of Yreka General Plan. http://www.ci.yreka.ca.us/DocumentCenter/View/119/General-Plan-PDF?bidId=. Accessed June 2023.

4.12 MINERAL RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

REGULATORY CONTEXT

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

STATE

Surface Mining and Reclamation Act of 1975 (SMARA)

The 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 resources of regional significance, and are intended to help maintain mining operations and protect them from encroachment of incompatible uses. The MRZs indicate the potential for an area to contain significant mineral resources.

LOCAL

City of Yreka

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

Conservation, Open Space, and Parks and Recreation Element		
Goal	CO.2	To ensure responsible mining and natural resource.
Objective	CO.2	The City does not have commercially viable mineral resources within the City Limits, but may encounter resources within the planning area. Most of the resources that may affect Yreka will be within the jurisdiction of Siskiyou County. The objective of this goal is to encourage a cooperative relationship with Siskiyou County in review and approval of future mining activities.

DISCUSSION OF IMPACTS

Questions A and B

According to the DOC, there are no designated MRZs in the project area (DOC, n.d.a). According to the DOC, Division of Mine Reclamation, there is one active quarry in proximity to the project area: Silva Quarry, ~0.9 miles north of the disposal fields (DOC, n.d.b). Due to the distance from the project area, the project would not interfere with the existing mining operations. Therefore, there would be ***no impact***.

CUMULATIVE IMPACTS

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

MITIGATION

None necessary.

DOCUMENTATION

California Department of Conservation, California Geological Survey. n.d.a Mineral Land Classification Maps. https://maps.conservation.ca.gov/cgs/informationwarehouse/. Accessed September 2023.

_____. **Division of Mine Reclamation**. n.d.b Mines Online Maps. https://maps.conservation.ca.gov/mol/index.html. Accessed September 2023.

City of Yreka. 2003. City of Yreka General Plan. http://www.ci.yreka.ca.us/DocumentCenter/View/119/General-Plan-PDF?bidId=. Accessed June 2023.

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.

L_{eq} L_{eq} (Equivalent Continuous Sound Pressure Level) is the average sound pressure level during a period of time that takes into account the cumulative effect of multiple noise events.

REGULATORY CONTEXT

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

LOCAL

City of Yreka

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

Noise Element		
Goal	1	To protect the existing and future citizens of Yreka from the harmful effects of exposure to excessive noise. More specifically, to protect existing noise-sensitive land uses from new uses that would generate noise levels which are incompatible with those uses, and to discourage new noise-sensitive land uses from being developed near sources of high noise levels.
Policies	6	The interior and exterior noise level standards for noise-sensitive areas of new uses affected by non-transportation noise sources in the City of Yreka are shown in Table 5 (Noise Standards for New Uses).
	7	The Table 5 standards are applied to both new noise-sensitive land uses and new noise-generating uses, with the responsibility for noise mitigation placed on the new use. For example, if a developer proposed construction of a new apartment complex near an existing industry, the developer would be responsible for including appropriate noise mitigation in the project design to achieve compliance with the Table 5 standards at the apartments. Conversely, if a new industry was proposed near an existing apartment complex, the industry would be responsible for including appropriate noise mitigation in the project design to achieve compliance with the Table 5 standards at the existing apartment building.
	8	Where the noise level standards of Table 5 are predicted to be exceeded at new uses proposed within the City of Yreka which are affected by or include non-transportation noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 5 standards.
	9	Noise associated with construction activities shall be exempt from the noise standards cited in Table 5 (Noise Standards for New Uses).
	10	Construction activities shall be limited to the hours of 7 a.m. to 5 p.m. unless an exemption is received from the City to cover special circumstances.
	11	All internal combustion engines used in conjunction with construction activities shall be muffled according to the equipment manufacturers' requirements.

General Plan Noise Element Table 5
Noise Standards for New Uses Affected by Non-Transportation Noise

	Outdoor Activity Area - L_{eq}		Interior - L_{eq}	
New Land Use	**Daytime**	**Nighttime**	**Day & Night**	**Notes**
All Residential	50	45	35	1, 2, 7
Transient Lodging	55		40	3
Hospitals & Nursing Homes	50	45	35	4
Theaters & Auditoriums			35	

	Outdoor Activity Area - L_{eq}		Interior - L_{eq}	
Churches, Meeting Halls, Schools, Libraries, etc.	55		40	
Office Buildings	55		45	5, 6
Commercial Buildings	55		45	5, 6
Playgrounds, Parks, etc.	65			6
Industry	65	65	50	5

Notes:

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

City of Yreka Municipal Code §11.01.075 (*Construction Work Hours)*

The City's Municipal Code §11.01.075 was adopted to protect citizens from the harmful effects of noise by restricting construction work within five hundred feet of any occupied residence to the daytime hours of 7:00 AM to 7:00 PM, Monday through Saturday, and 8:00 AM to 5:00 PM on Sunday. Exceptions to these limitations may be granted by the chief building inspector for emergency work, to offset project delays due to inclement weather, for twenty-four-hour construction projects, or similar occurrences. City projects determined to be emergencies shall be exempt from these provisions.

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

A change of 1 decibel, A-weighted (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).

Construction Noise

Construction activities at the WWTP, disposal fields, and lift stations would temporarily increase noise levels at nearby single-family residences. Construction activities at the disposal fields would occur ~200 feet from residences on the west side of SR 263 and southeast of the southern extent of the disposal field improvements.

Construction activities at the WWTP would occur ~500 feet northeast of a single-family residence. Construction activities at the lift stations would occur ~200 feet from dwelling units along Montague Road and ~700 feet from dwelling units along N. Phillipe Lane.

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

Noise impacts resulting from other 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. As shown in **Table 4.13-1**, construction equipment anticipated to be used for project construction typically generates maximum noise levels ranging from 74 to 89 decibels dBA at a distance of 50 feet.

TABLE 4.13-1
Examples of Construction Equipment
Noise Emission Levels

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

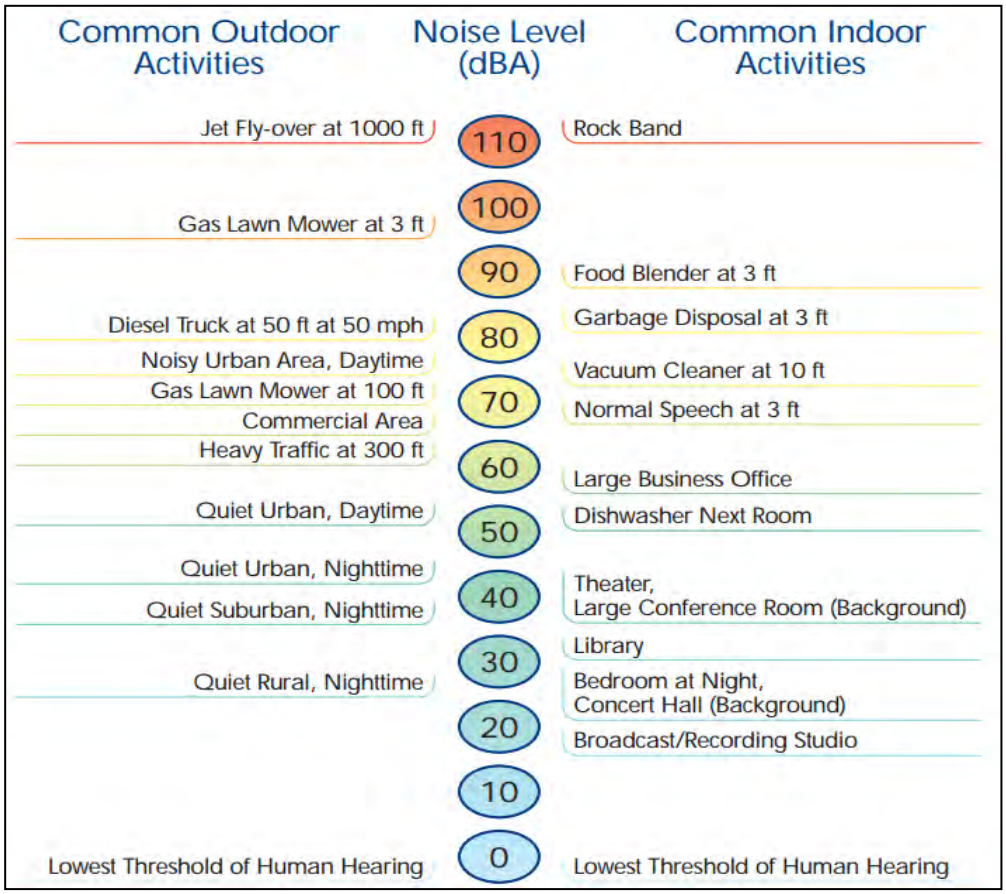
TABLE 4.13-1
Examples of Construction Equipment
Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 feet from Source
Jack Hammer	88
Truck	88
Paver	89
Scraper	89

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

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 at the source.

FIGURE 4.13-1
Noise Levels of Common Activities



Source: Caltrans, 2016

Noise from construction activities generally attenuates at a rate of 6 dBA (on hard and flat surfaces) to 7.5 dBA (on soft surfaces, such as uneven and/or vegetated terrain) per doubling of distance. If the receptor is far from the noise source, other factors come into play. For example, barriers such as fences or buildings that break the line of sight between the source and the receiver typically reduce sound levels by at least 5 dBA. Likewise, wind can reduce noise levels by 20 to 30 dBA over long distances. Assuming typical California construction methods, interior noise levels are approximately 10 to 15 dBA lower than exterior levels within residential units with the windows partially open, and approximately 20 to 25 dB lower than exterior noise levels with the windows closed.

In the disposal fields, improvements would occur on vegetated terrain, and it is anticipated that noise would attenuate at 7.5 dBA per doubling of distance. At the WWTP and lift stations, it is anticipated that noise would attenuate at 6 dBA per doubling of distance.

Because it is a logarithmic unit of measurement, a decibel cannot be added or subtracted arithmetically. The combination of two or more identical sound pressure levels at a single location involves the addition of logarithmic quantities as shown in **Table 4.13-2.** A doubling of identical sound sources results in a sound level increase of approximately 3 dB. Three identical sound sources would result in a sound level increase of approximately 4.8 dB.

For example, if the sound from one backhoe resulted in a sound pressure level of 80 dB, the sound level from two backhoes would be 83 dB, and the sound level from three backhoes would be 84.8 dB.

TABLE 4.13-2
Cumulative Noise: Identical Sources

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

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

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

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

TABLE 4.13-3
Cumulative Noise: Different Sources

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

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

Disregarding the noise attenuation due to intervening topography, barriers, wind, and other factors, with more than one piece of equipment with a cumulative noise level of 92 dBA operating at the disposal fields, noise levels could sporadically reach ~77 dBA at the exterior of the nearest residence (a distance of 200 feet, assuming an attenuation rate of 7.5 dBA per doubling of distance); interior noise levels could reach ~57 dBA, provided the windows were closed.

With more than one piece of equipment with a cumulative noise level of 92 operating at the WWTP, noise levels could sporadically reach ~72 dBA at the exterior of the nearest residence (a distance of 500 feet, assuming an attenuation rate of 6 dBA per doubling of distance); interior noise levels could reach ~52 dBA, provided the windows were closed.

For LS improvements, the cumulative noise level associated with construction is estimated at 89 dBA; noise levels could sporadically reach ~77 dBA at the exterior of the nearest residence (a distance of 200 feet, assuming an attenuation rate of 6 dBA per doubling of distance); interior noise levels could reach ~57 dBA, provided the windows were closed. The use of reverse signal alarms would contribute to cumulative noise in the study area; given the distance between the work sites and sensitive receptors, noise levels could sporadically increase ~3 to ~5 dBA above the noise levels identified above when reverse signal alarms are used.

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, 2024). 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 Yreka does not have specific thresholds for construction noise; however, the California Division of Safety and Health and OSHA have established thresholds for exposure to noise in order to prevent hearing damage. The maximum allowable daily noise exposure is 90 dBA for 8 hours, 95 dBA for 4 hours, 100 dBA for 2 hours, 105 dBA for 1 hour, 110 dBA for 30 minutes, and 115 dBA for 15 minutes (Caltrans, 2013).

As documented above, interior noise levels from construction equipment operation are anticipated to range between ~52 and ~57 dBA, provided that the windows are closed. These noise levels could sporadically be ~3 to ~5 dBA higher during use of reverse signal alarms.

However, construction equipment does not operate continuously throughout the entire workday. In addition, reverse signal alarms are needed only intermittently, and each occurrence involves only seconds of elevated noise levels. Therefore, while construction noise may reach considerable levels for short instances, a majority of the time the construction noise levels at nearby sensitive receptors would be moderate.

As described under Regulatory Context, the City of Yreka Municipal Code §11.01.075 (*Construction Work Hours*), restricts construction work to the daytime hours of 7:00 AM to 7:00 PM, Monday through Saturday, and 8:00 AM to 5:00 PM on Sundays, with certain exceptions. To further minimize impacts from construction noise, **MM 4.13.1** requires that construction equipment be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, and **MM 4.13.2** mandates that stationary equipment, such as generators and compressors, be located at the furthest practical distance from nearby noise-sensitive land uses.

Operational Noise

Improvements at the disposal fields and lift stations would not result in an increase in operational noise above existing levels.

Improvements at the WWTP with the potential to increase operational noise levels above existing levels include the new grinder upstream of the spiral screen at the headworks, higher-power surface aerators in Aeration Basins 1 and 2, new mechanical mixers in the digesters, and larger return activated sludge (RAS), waste activated sludge (WAS), scum, sludge, water, and drainage pumps. Although the new surface aerators would be larger, the newer aerators are anticipated to be more efficient models with lower noise levels. Further, the mechanical mixers would be below water, the WAS, sludge, and water pumps would be located inside the control building, and the drainage pumps would be inside a wet well, which would attenuate noise from these sources.

Based on review of similar facilities, it is estimated that the noise levels from the new pumps, motors, and other new facilities at the WWTP would be between 65 and 70 dBA at 50 feet. The nearest sensitive receptor to the new noise sources is a single-family residence ~600 feet to the northwest. Disregarding the noise attenuation provided by intervening topography, barriers, wind, and other factors, exterior noise levels at the nearest residence could reach ~48 dBA, and interior noise levels could reach ~28 dBA, provided that the windows were closed.

It is estimated that trees, vegetation, fences, and outbuildings that break the line of sight between the WWTP and the nearest sensitive receptor would reduce sound levels by at least 5 dBA. Exterior noise levels at the nearest sensitive receptor would be ~43 dBA and interior noise levels would be ~23 dBA; this complies with the City's noise standards identified in General Plan Noise Element Table 5 shown under Regulatory Context.

Compliance with the City's existing limitations for construction hours and implementation of **MM 4.13.1** and **MM 4.13.2** ensures that impacts would be ***less than significant***.

Question B

Excessive vibration during construction occurs only when high vibration equipment (e.g., compactors, large dozers, etc.) are operated. The proposed project may require limited use of equipment with high vibration levels during construction. Potential effects of ground-borne vibration include perceptible movement of building floors, rattling windows, shaking of items on shelves or hangings on walls, and rumbling sounds. In extreme cases, vibration can cause damage to buildings. Both human and structural 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 criteria were referenced in the analysis of construction-related vibration impacts.

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

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

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

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

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

TABLE 4.13-5
Human Response to Ground-Borne Vibration

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

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

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

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

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

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

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

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

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 the ground).

Based on this equation, in the worst-case scenario for work occurring at the WWTP site, a vibratory roller would generate a PPV of ~0.008 inches per second at the nearest residence. In the worst-case scenario for work occurring at the disposal field site, a large bulldozer would generate a PPV of ~0.009 inches per second at the nearest residence. As shown in **Table 4.13-4**, these vibration levels would not be at a level that would cause structural damage. As shown in **Table 4.13-5**, these vibration levels are not expected to be perceptible at the nearest residences.

New equipment at the WWTP has the potential to result in a permanent increase in groundborne vibration or groundborne noise due to the operation of mechanical equipment (e.g., pumps, motors, compressors, etc.). Due to the distance between the equipment and the nearest residence (~600 feet), it is not expected that equipment at the WWTP would generate vibration that would be detectable at the residence. Therefore, impacts associated with vibration would be ***less than significant.***

Question C

See discussion in Section 4.9 under Question E. The nearest airport to the project site is the Montague Airport-Yreka Rohrer Field, located ~2.8 miles east of the lift stations and ~4.5 miles east of the WWTP and disposal fields. According to the Federal Aviation Administration (FAA), the project site is not located in the vicinity of a private airstrip. 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

The project does not include any components that would result in a significant increase in operational noise and would not result in adverse effects associated with vibration either during construction or operation. The project would result in a temporary increase in daytime noise levels during construction activities. However, all construction projects in the City are required to comply with limitations for construction hours pursuant to §11.01.075 (*Construction Work Hours*) of the City's Municipal Code.

Compliance with limitations for construction work hours and implementation of **MM 4.13.1** and **MM 4.13.2** ensures that the project's contribution to cumulative noise impacts would be less than significant.

MITIGATION

MM 4.13.1 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 4.13.2 Stationary equipment (pumps, compressors, etc.) used during project construction shall be located at the furthest practical distance from nearby noise-sensitive land uses.

DOCUMENTATION

California Department of Transportation. 2020. Transportation and Construction Vibration Guidance Manual. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf. Accessed May 2023.

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U.S. Department of Transportation, Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed May 2023.

4.14 POPULATION AND HOUSING

Would the project:

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

REGULATORY CONTEXT

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

LOCAL

City of Yreka General Plan Housing Element

The City's Housing Element Update for the 2023-2031 planning period was adopted on February 7, 2023. The purpose of the Housing Element is to establish specific goals, policies, and objectives relative to the provision of housing.

DISCUSSION OF IMPACTS

Questions A

The project does not include the construction of housing or businesses that would directly increase population in the area. The project includes upsizing some pumps and motors at the WWTP to accommodate existing and anticipated growth within the next 20 years as projected in the City's 2019 Master Sewer Plan. The Master Plan is based on a projected average annual growth rate of one percent.

According to the City's 2023-2031 Housing Element, Yreka's population has fluctuated over the years, but overall growth has been relatively slow and steady. Between 2010 and 2020, the City's population increased by ~0.5 percent over the ten-year period (City of Yreka, 2023). According to the Department of Finance Demographic Research Unit (DOF), the City's population decreased by ~0.80 percent between 2021 and 2022, increased by ~1.2 percent between 2022 and 2023, and decreased by ~0.2% between 2023 and 2024 (DOF, 2024). DOF also provides population projections for California counties from 2020 through 2060. The projections show a continuing decline in population for Siskiyou County through the Housing Element planning period and beyond (DOF, 2023).

Although there are no population projections for the City of Yreka, based on the City's historic growth rate, it is likely that the City's future growth rate will resemble the growth rate projected for Siskiyou County, either with or without the proposed project. Therefore, the project would not induce unplanned population growth in the area. There would be ***no impact.***

Question B

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

CUMULATIVE IMPACTS

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

MITIGATION

None necessary.

DOCUMENTATION

California Department of Finance (DOF), Demographic Research Unit. 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024. https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed June 2024.

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City of Yreka. 2023. City of Yreka 2023-2031 Housing Element Update. https://ci.yreka.ca.us/DocumentCenter/View/1364/2023-2031Adopted-Housing-Element?bidId=. Accessed April 2023.

4.15 PUBLIC SERVICES

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

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

REGULATORY CONTEXT

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

DISCUSSION OF IMPACTS

Questions A through E

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

CUMULATIVE IMPACTS

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

MITIGATION

None necessary.

DOCUMENTATION

City of Yreka. 2003. City of Yreka General Plan. http://www.ci.yreka.ca.us/documentcenter/view/119. Accessed June 2023.

4.16 RECREATION

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b. Include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

REGULATORY CONTEXT

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

DISCUSSION OF IMPACTS

Questions A and B

The proposed project does not include the construction of houses or businesses that would increase the number of residents in the area. In addition, as discussed in Section 4.14 under Question A, the proposed project would not induce 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 Yreka. 2003. City of Yreka General Plan. http://www.ci.yreka.ca.us/documentcenter/view/119. Accessed June 2023.

4.17 TRANSPORTATION

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☐	☒
b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) (criteria for analyzing transportation impacts – vehicle miles traveled)?	☐	☐	☐	☒
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d. Result in inadequate emergency access?	☐	☐	☐	☒

REGULATORY CONTEXT

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

STATE

CEQA Guidelines

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

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

DISCUSSION OF IMPACTS

Questions A, C, and D

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. Further, the project does not include any components that would increase the potential for hazards due to a design feature or incompatible uses. As stated in Section 4.9 (Hazards and Hazardous Materials) under Question F, the proposed project does not include work in the public road right-of-way (ROW) that would impede traffic and does not involve a use or activity that would impair implementation of or physically interfere with emergency response or emergency evacuation plans. Therefore, there would be ***no impact.***

Question B

The project does not include the construction of housing or commercial/industrial development that would cause a permanent increase in traffic or VMT in the area. As stated in Section 3.1 (Project Background, Need, and Objectives), the WWTP does not have a SCADA system to facilitate operation and monitoring of the plant. Currently, plant operators must be at the WWTP continuously

during changing or high flows in order to prevent discharge violations. The SCADA system would allow operators to monitor and control major processes at the WWTP and lift stations remotely, thereby resulting in a reduction in VMT by City wastewater treatment operators.

VMT during construction would be attributed to construction worker trips, equipment delivery, and haul trips for demolished facilities and soil import/export. Although there would be an increase in VMT during construction, this is a temporary impact that would cease at completion of the improvements. Therefore, there would be ***no impact***.

CUMULATIVE IMPACTS

As documented above, the proposed project would have no effect on the transportation system. Therefore, the proposed project would not contribute to cumulatively considerable impacts related to transportation.

MITIGATION

None necessary.

DOCUMENTATION

City of Yreka. 2002. City of Yreka General Plan. http://www.ci.yreka.ca.us/documentcenter/view/119. Accessed May 2023.

4.18 TRIBAL CULTURAL RESOURCES

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

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

REGULATORY CONTEXT

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

STATE

California Environmental Quality Act (CEQA)

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

1. The tribe requested to the lead agency, in writing, to be informed through formal notification of proposed projects in the geographical area; and

2. The tribe responds, in writing, within 30 days of receipt of the formal notification and requests the consultation.

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

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

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

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

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).

LOCAL

City of Yreka

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

Land Use Element		
Goal	LU.12	To protect and preserve the historical resources of the City.
Objective	LU.11	Maintain the review process and application of standards for the preservation of the historic resources within the established historic district. Expand protection to other historic structures and archaeological resources that are located elsewhere in the community outside of the historic district.
Program	LU.12.B	If during the course of disturbance of a project site human remains are discovered, construction shall stop immediately, and such find reported to the County Coroner. Work on the site with the potential for disturbing such remains shall not occur until authorized by the Coroner.

DISCUSSION OF IMPACTS

Questions A and B

See discussion in Section 1.8 (Tribal Cultural Resources Consultation) and Section 4.5 (Cultural Resources).

On July 26, 2023, ENPLAN contacted Native American tribes that were identified by the Native American Heritage Commission (NAHC) with a request to provide comments on the proposed project. Comment solicitation letters were sent to Russell Attebery, Tribal Chair, Karuk Tribe; Alex Watts-Tobin, Tribal Historic Preservation Officer (THPO), Karuk Tribe; Harold Bennett, Tribal Chair, Quartz Valley Indian Community; Sherry Smith, Tribal Administrator, Quartz Valley Indian Reservation; Les Anderson, Cultural and Heritage Department, Klamath Tribes; Robert Burkybile, Operations Manager, Modoc Tribe of Oklahoma; Troy LittleAxe, Assistant Tribal Administrator, Modoc Tribe of Oklahoma; Ken Sandusky, Resource and Development Director, Modoc Tribe of Oklahoma; Sami Jo Difuntorum, Cultural Resource Preservation Officer, Shasta Indian Nation and Roy V. Hall Jr., Tribal Chair, Shasta Nation.

Follow-up correspondence was conducted on November 7 and 13, 2023. The Modoc Tribe of Oklahoma commented that they have no concerns with the proposed project. No comments were received from any of the other tribes that were contacted.

Mitigation Measures MM 4.5.1 and 4.5.2 address the inadvertent discovery of cultural resources and human remains. As required by **MM 4.5.2**, in the event that human remains are encountered during construction activities, all project-related ground disturbance within 100 feet of the find shall be halted until the County coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the NAHC to identify the most likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed in §15064.5 (e) of the CEQA Guidelines has been completed. Implementation of **MM 4.5.1 and 4.5.2** ensures that impacts are ***less than significant***.

CUMULATIVE IMPACTS

Cumulative projects in the vicinity of the project area have the potential to impact tribal cultural resources. Tribal cultural resources are afforded special legal protections designed to reduce the cumulative effects of development. Potential cumulative projects and the proposed project would be subject to the protection of tribal cultural resources afforded by PRC §21084.3. Given the non-renewable nature of tribal cultural resources, any impact to tribal cultural sites, features, places, landscapes or objects could be considered cumulatively considerable. As discussed above, no cultural resources of significance to a California Native American tribe were identified within the project area. In addition, **MM 4.5.1 and 4.5.2** address the inadvertent discovery of cultural resources; therefore, the proposed project would have less than significant cumulative impacts to tribal cultural resources.

MITIGATION

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

DOCUMENTATION

City of Yreka. 2003. City of Yreka General Plan Update, 2002-2022. http://www.ci.yreka.ca.us/DocumentCenter/View/119/General-Plan-PDF?bidId=. Accessed June 2023.

ENPLAN. 2024. Cultural Resources Inventory Report, City of Yreka Wastewater Treatment Plant Improvement Project. On file at NEIC/CHRIS.

4.19 UTILITIES AND SERVICE SYSTEMS

Would the project:

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

REGULATORY CONTEXT

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

STATE

California Integrated Waste Management Act of 1989

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

California Building Standards Code (CBSC)

The California Green Building Code (CALGreen Code), included as Part 11 of the CBSC, includes requirements for construction waste reduction, disposal, and recycling. The intent of this requirement is to reduce the amount of waste from new construction and demolition that would be sent to landfills, and to encourage reuse and recycling of construction waste products (e.g., carpet, wood, aggregate, shingles, wallboard, and other materials that have recyclable value).

LOCAL

City of Yreka

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

Public Facilities Element		
Goal	PF.4	Develop and properly maintain facilities to transport, treat, and discharge wastewater in a safe and sanitary manner.
Objective	PF.4	Provide the City with the means to ensure that the investment in system-wide improvements remains constant in terms of growth demand and simple deterioration over time.

City of Yreka Master Sewer Plan (2019)

The City's Master Sewer Plan identifies the major capital improvements that will be necessary to improve the sewer system to accommodate growth identified in the City's General Plan.

DISCUSSION OF IMPACTS

Question A

The proposed project does not require the relocation or construction of new or expanded water or natural gas facilities. As identified in Section 3.2 (Project Components/Physical Improvements), proposed improvements include the construction of new wastewater treatment facilities and associated drainage improvements, electrical improvements, and the extension of fiber optic cable to the WWTP site. Potential impacts of these improvements are identified in applicable resource sections of this Initial Study. Implementation of the MMs identified in Section 1.10 (Proposed Mitigation Measures) ensures that 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. As discussed in Section 4.14 under Question A, the proposed project would not induce population growth either directly or indirectly that would require additional long-term water supplies or increase the demand for wastewater treatment. Therefore, there would be ***no impact***.

Questions D and E

The City of Yreka is a participating member of the Siskiyou County Integrated Solid Waste Management Regional Agency. The Agency manages solid waste and green waste collection and disposal throughout the County. There is one transfer station in the City of Yreka at 2420 Oberlin Road (47-AA-0057) (CalRecycle, 2023a). The Oberlin Road Transfer Station accepts mixed municipal and inert solid waste and has a maximum permitted throughput of 100 tons per day and a maximum permit capacity of 35,864 tons per year.

Because there are no active landfills in Siskiyou County, most solid waste in the County is exported to the Dry Creek Landfill in southern Oregon or the Anderson Landfill in Anderson, California (CalRecycle, 2023b). The Dry Creek Landfill was expanded to a regional facility in 1999 and has a projected operational life exceeding 100 years (Dry Creek Landfill, Inc., n.d.). The Anderson Landfill is permitted for up to 1,850 tons per day, although actual waste receipts have been far less than the maximum permitted amount except when wildfire debris is accepted (Geosyntec Consultants, 2023). The estimated site life for the remaining net capacity (excluding wildfire debris) is approximately 52 years as of April 5, 2023, with anticipated closure around 2075.

The proposed project would not result in a long-term demand for additional solid waste services. Solid waste would be generated during construction, mainly from removal of existing WWTP components and structures to accommodate the proposed improvements. It is estimated that

construction/demolition activities will generate ~300 tons of waste material; however, as stated under Regulatory Context, the CALGreen Code includes requirements for reuse and recycling of construction waste products so the amount of waste diverted to the landfill is expected to be less than 300 tons. There is adequate capacity in both the Dry Creek and Anderson landfills to accommodate construction waste.

The City will ensure through contractual obligations that the contractor complies with all federal, State, and local statutes related to solid waste disposal. Therefore, impacts would be ***less than significant***.

CUMULATIVE IMPACTS

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

MITIGATION

Implementation of the Mitigation Measures identified in Section 1.10.

DOCUMENTATION

City of Yreka. 2002. City of Yreka General Plan. http://www.ci.yreka.ca.us/documentcenter/view/119. Accessed May 2023.

CalRecycle. 2023a. SWIS Facility/Site Summary, Oberlin Road Transfer Station (47-AA-0057). https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/4685. Accessed December 2023.

_____. 2023b. RDRS Report: Total Jurisdiction Disposal or Disposal Related Material by Quarter Sent Through Transfer/Processors vs. Directly to Landfills. https://www2.calrecycle.ca.gov/RecyclingDisposalReporting/Reports/TotalJurisdictionDisposalTransferProcessor. Accessed December 2023.

Dry Creek Landfill, Inc. n.d. Dry Creek Landfill, Inc., Website. https://drycreeklandfill.com/. Accessed December 2023.

Geosyntec Consultants. 2023. Joint Technical Document, Anderson Landfill. https://secure.calrecycle.ca.gov/SWISDocument/Document/Details/448312

4.20 WILDFIRE

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

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

REGULATORY CONTEXT

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

STATE

California Department of Forestry and Fire Protection (CAL FIRE)

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

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

Public Health and Safety Element		
Goal	PH.3	Protect people and property within the City of Yreka against fire related loss and damage.
Objective	PH.3	The objective of this goal is to reduce the fire hazard to the City of Yreka.
Programs	PH.3.A	Maintain current levels of service for fire protection by continuing to require development projects to provide for and/or fund fire protection facilities, personnel, and operations and maintenance.
	PH.3.B	Require all new development projects to design public facility improvements to ensure that water volume and hydrant spacing are adequate to support efficient and effective fire suppression.
	PH.3.E	Enforce the requirements of Public Resources Code Sections 4290 and 4291 on all development projects. This includes, but is not limited to, the following: • Maintain roofs of structures free of vegetative growth. • Remove any portion of trees growing within ten feet or chimney/stovepipe outlets. • Maintain screens over chimney/stovepipe outlets or other devices that burn any solid or liquid fuel.

DISCUSSION OF IMPACTS

According to FHSZ maps prepared by CAL FIRE, the WWTP, disposal fields, and lift stations are not located within a designated FHSZ. The WWTP and disposal fields are located east of an area designated as a SRA High FHSZ (CAL FIRE, 2023).

Question A

See discussion in Section 4.9 (Hazards and Hazardous Materials) under Question F. The proposed project does not include work in the public road right-of-way (ROW) that would impede traffic and does not involve a use or activity that would impair implementation of or physically interfere with emergency response or emergency evacuation plans. Therefore, there would be ***no impact***.

Questions B and C

There are no slopes, prevailing winds, or other factors in the project area that would exacerbate wildfire risks in the long-term or result in the exposure of people to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Construction would occur primarily in previously disturbed areas with a low risk of fire hazards. As stated in Section 4.9 under Question G, the contractor is responsible for providing firefighting equipment and maintaining unobstructed access to all available firefighting equipment at all times in accordance with Cal/OSHA regulations. Therefore, the potential for impacts is ***less than significant.***

Question D

The severity of post-fire risks is based on several factors, including the intensity of the fire, the slope and stability of the burned area, physical properties of the soils, and the intensity of post-fire precipitation. The project site is not located in or adjacent to a burn scar area, and improvements would be completed in level areas with a low potential for landslides. Although the disposal field site is located within a designated flood hazard area, the improvements would be subsurface and would

not be exposed to risks associated with downslope or downstream flooding or landslides attributable to post-fire slope instability, runoff, or drainage changes. Therefore, the potential for post-fire impacts would be ***less than significant***.

CUMULATIVE IMPACTS

The proposed project would not impair an adopted emergency response plan or emergency evacuation plan; therefore, it would not contribute to cumulative impacts related to such plans. In the long term, the proposed project would not contribute individually or cumulatively to increased risks of wildfire, effects of fire prevention/suppression infrastructure, or post-fire hazards. Although cumulative wildfire risks could occur during construction, compliance with existing regulations adequately minimizes such risks. Therefore, the project's contribution to cumulative impacts would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Forestry and Fire Protection (CAL FIRE). 2023. Fire Hazard Severity Zone Viewer. https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/. Accessed June 2024.

City of Yreka. 2003. City of Yreka General Plan. http://www.ci.yreka.ca.us/DocumentCenter/View/119/General-Plan-PDF?bidId=. Accessed June 2023.

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 impacts to special-status wildlife species, disturbance of nesting birds (if present), impacts to sensitive natural communities, the introduction and spread of noxious weeds during construction, impacts to cultural resources and tribal cultural resources (if present), impacts related to geologic/soils conditions, impacts to paleontological resources (if present), temporarily increased risk of exposure to contaminated materials (if present), temporarily increased air emissions, and temporarily increased noise and vibration levels. However, mitigation measures are included to ensure that impacts are ***less than significant.***

Question B

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

Question C

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

SECTION 5.0 LIST OF PREPARERS

ENPLAN

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Kiara Cuerpo-Hadsall ..... Environmental Planner
Hannah Raab ..... Environmental Planner
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City of Yreka

Matthew Bray ..... Public Works Director
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PACE Engineering, Inc.

Curtis Paget, P.E. ..... Senior Engineer

SECTION 6.0 ABBREVIATIONS AND ACRONYMS

AB	Assembly Bill
ADA	Americans with Disabilities Act
ADWF	Average Dry Weather Flow
APE	Area of Potential Effects
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
BSR	Biological Study Report
BUG	Backlight, Uplight, and Glare
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention Program
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CALGreen	California Green Building Code
Caltrans	California Department of Transportation
CAP	Criteria Air Pollutant
CARB	California Air Resources Board
CASGEM	California Statewide Groundwater Elevation Monitoring
CBSC	California Building Standards Code
CCR	California Code of Regulations
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CEC	California Energy Code
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGC	California Government Code
CGS	California Geological Survey
CH_4	Methane
City	City of Yreka
CIWMA	California Integrated Waste Management Act
CMU	Concrete Masonry Unit
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
County	Siskiyou County
CRHR	California Register of Historical Resources

CRI	Cultural Resources Inventory
CWA	Clean Water Act
CWSRF	Clean Water State Revolving Fund
CY	Cubic Yards
dB	Decibels
dBA	Decibels, A-Weighted
DOC	Department of Conservation
DOF	California Department of Finance
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EFH	Essential Fish Habitat
EO	Executive Order
EIR	Environmental Impact Report
ESU	Evolutionary Significant Unit
°F	Fahrenheit
FAA	Federal Aviation Administration
FC	Federal Candidate
FE	Federally Endangered
FEMA	Federal Emergency Management Act
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FMMP	California Farmland Mapping and Monitoring Program
FP	Federally Proposed
FPT	Federally Proposed Threatened
FT	Federally Threatened
GHG	Greenhouse Gas
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWh	Gigawatts Hours
GWP	Global Warming Potential
H_2S	Hydrogen Sulfide
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbon
HP	Horsepower
IBC	International Building Code
IPCC	Intergovernmental Panel on Climate Change
lbs/day	Pounds per Day
L_{eq}	Equivalent Continuous Sound Pressure Level
LRA	Local Responsibility Area
LS	Lift Station
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level

MGD	Millions Gallons Per Day
mg/m^3	Milligrams per Cubic Meter
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MS4	Small Municipal Separate Storm Sewer Systems
MT	Metric Tons
MUTCD	California Manual on Uniform Traffic Control Devices
N_2	Nitrogen
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NCRWQCB	North Coast Regional Water Quality Control Board
NEIC/CHRIS	Northeast Information Center of the California Historical Resources Information System
NEHR	National Earthquakes Hazards Reduction Act
NEMA	National Electrical Manufacturers Association
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NF_3	Nitrogen Trifluoride
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPPA	California Native Plant Protection Act
NRHP	National Register of Historic Places
NWP	Nationwide Permit
O	Open Space
O_2	Oxygen
O_3	Ozone
OHWM	Ordinary High-Water Mark
OSHA	Occupational Safety and Health Act
Pb	Lead
PERP	Portable Equipment Registration Program
PFC	Perfluorocarbon
$PM_{2.5}$	Particulate Matter, 2.5 microns in size
PM_{10}	Particulate Matter, 10 microns in size

PPB	Parts per Billion
PPM	Parts per Million
PPV	Peak Particle Velocity
PRC	Public Resources Code
Project	City of Yreka Wastewater Treatment Plant Improvement Project
PVC	Polyvinyl Chloride
PWWF	Peak Wet Weather Flow
RAS	Return Activated Sludge
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
ROG	Reactive Organic Gases
ROW	Right-of-Way
RPS	Renewables Portfolio Standard
RPR	Rare Plant Rank
RSC	Recreation, School, Conservation, and Open Space
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SB	Senate Bill
SC	State Candidate
SCADA	Supervisory Control and Data Acquisition
SCAPCD	Siskiyou County Air Pollution Control District
SCE	State Candidate Endangered
SE	State Endangered
SF_6	Sulfur Hexafluoride
SFP	State Fully Protected
SGMA	Sustainable Groundwater Management Act
SHMA	California Seismic Hazards Mapping Act
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SMARTS	Stormwater Multiple Application and Report Tracking System
SMC	Sustainable Management Criteria
SO_2	Sulfur Dioxide
SO_4	Sulfates
SONCC	Southern Oregon / Northern California Coast
SR	State Route
SRA	State Responsibility Area
SRIA	Standardized Regulatory Impact Assessment
SSC	Species of Special Concern
SSSC	State Species of Special Concern
ST	State Threatened
SUSWMP	Standard Urban Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board

TAC	Toxic Air Contaminant
THPO	Tribal Historic Preservation Officer
tons/year	Tons per Year
UCMP	University of California Berkeley Museum of Paleontology
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UV	Ultraviolet
VMT	Vehicle Miles Traveled
WAS	Waste Activated Sludge
WDR	Waste Discharge Requirement
WWTP	Wastewater Treatment Plant
$\mu g/m^3$	Micrograms per Cubic Meter

APPENDIX A

CalEEMod Version 2022.1.1.22 Emissions Reports

Yreka Wastewater Treatment Plant Improvements Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Yreka Wastewater Treatment Plant Improvements
Construction Start Date	4/1/2026
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	35.6
Location	41.74414377696317, -122.6308567877192
County	Siskiyou
City	Yreka
Air District	Siskiyou County APCD
Air Basin	Northeast Plateau
TAZ	165
EDFZ	0-D
Electric Utility	PacifiCorp
Gas Utility	—
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

General Light Industry	6.82	1000sqft	0.16	6,824	0.00	0.00	—	—
Other Non-Asphalt Surfaces	1.13	Acre	1.13	0.00	0.00	0.00	—	—
Other Asphalt Surfaces	8.00	1000sqft	0.18	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-9	Use Dust Suppressants
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads
Construction	C-13	Use Low-VOC Paints for Construction
Waste	S-4*	Recycle Demolished Construction Material
Area Sources	AS-2	Use Low-VOC Paints

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.73	3.14	28.1	28.4	0.07	1.13	3.99	5.12	1.04	1.53	2.57	—	7,557	7,557	0.28	0.19	2.25	7,623
Mit.	1.78	1.50	14.0	15.4	0.03	0.60	3.08	3.68	0.55	1.42	1.97	—	3,391	3,391	0.11	0.15	1.91	3,442

% Reduced	52%	52%	50%	46%	57%	47%	23%	28%	47%	7%	23%	—	55%	55%	61%	19%	15%	55%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.24	6.42	8.64	10.1	0.02	0.29	0.11	0.33	0.27	0.03	0.28	—	1,863	1,863	0.08	0.02	0.01	1,872
Mit.	1.24	2.20	8.64	10.1	0.02	0.29	0.11	0.33	0.27	0.03	0.28	—	1,863	1,863	0.08	0.02	0.01	1,872
% Reduced	—	66%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.92	0.98	6.66	7.43	0.01	0.25	0.43	0.68	0.23	0.17	0.39	—	1,549	1,549	0.06	0.03	0.14	1,558
Mit.	0.74	0.63	5.36	6.12	0.01	0.20	0.35	0.55	0.18	0.16	0.34	—	1,179	1,179	0.04	0.02	0.12	1,188
% Reduced	20%	35%	20%	18%	22%	19%	18%	19%	19%	6%	14%	—	24%	24%	25%	12%	13%	24%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.17	0.18	1.22	1.36	< 0.005	0.05	0.08	0.12	0.04	0.03	0.07	—	256	256	0.01	< 0.005	0.02	258
Mit.	0.13	0.12	0.98	1.12	< 0.005	0.04	0.06	0.10	0.03	0.03	0.06	—	195	195	0.01	< 0.005	0.02	197
% Reduced	20%	35%	20%	18%	22%	19%	18%	19%	19%	6%	14%	—	24%	24%	25%	12%	13%	24%

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.73	3.14	28.1	28.4	0.07	1.13	3.99	5.12	1.04	1.53	2.57	—	7,557	7,557	0.28	0.19	2.25	7,623
2027	1.18	0.99	8.31	10.1	0.02	0.26	0.11	0.30	0.24	0.02	0.25	—	1,863	1,863	0.07	0.02	0.40	1,871

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.24	1.03	8.64	10.1	0.02	0.29	0.03	0.33	0.27	0.01	0.28	—	1,863	1,863	0.08	0.02	0.01	1,872
2027	1.18	6.42	8.32	10.1	0.02	0.26	0.11	0.30	0.24	0.03	0.25	—	1,862	1,862	0.08	0.02	0.01	1,870
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.92	0.77	6.66	7.43	0.01	0.25	0.43	0.68	0.23	0.17	0.39	—	1,549	1,549	0.06	0.03	0.14	1,558
2027	0.60	0.98	4.22	5.27	0.01	0.13	0.02	0.16	0.12	0.01	0.13	—	951	951	0.04	0.01	0.05	955
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.17	0.14	1.22	1.36	< 0.005	0.05	0.08	0.12	0.04	0.03	0.07	—	256	256	0.01	< 0.005	0.02	258
2027	0.11	0.18	0.77	0.96	< 0.005	0.02	< 0.005	0.03	0.02	< 0.005	0.02	—	158	158	0.01	< 0.005	0.01	158

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.78	1.50	14.0	15.4	0.03	0.60	3.08	3.68	0.55	1.42	1.97	—	3,391	3,391	0.11	0.15	1.91	3,442
2027	1.18	0.99	8.31	10.1	0.02	0.26	0.11	0.30	0.24	0.02	0.25	—	1,863	1,863	0.07	0.02	0.40	1,871
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.24	1.03	8.64	10.1	0.02	0.29	0.03	0.33	0.27	0.01	0.28	—	1,863	1,863	0.08	0.02	0.01	1,872
2027	1.18	2.20	8.32	10.1	0.02	0.26	0.11	0.30	0.24	0.03	0.25	—	1,862	1,862	0.08	0.02	0.01	1,870
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.74	0.62	5.36	6.12	0.01	0.20	0.35	0.55	0.18	0.16	0.34	—	1,179	1,179	0.04	0.02	0.12	1,188
2027	0.60	0.63	4.22	5.27	0.01	0.13	0.02	0.16	0.12	0.01	0.13	—	951	951	0.04	0.01	0.05	955

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.13	0.11	0.98	1.12	< 0.005	0.04	0.06	0.10	0.03	0.03	0.06	—	195	195	0.01	< 0.005	0.02	197
2027	0.11	0.12	0.77	0.96	< 0.005	0.02	< 0.005	0.03	0.02	< 0.005	0.02	—	158	158	0.01	< 0.005	0.01	158

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.41	0.17	1.34	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	7.58	434	442	0.79	0.02	2.49	470
Mit.	0.23	0.37	0.17	1.34	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	7.58	434	442	0.79	0.02	2.49	470
% Reduced	—	9%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.17	0.36	0.20	1.17	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	7.58	426	433	0.79	0.02	1.79	462
Mit.	0.17	0.32	0.20	1.17	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	7.58	426	433	0.79	0.02	1.79	462
% Reduced	—	10%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.18	0.37	0.17	1.14	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.05	7.58	407	414	0.79	0.02	2.06	442
Mit.	0.18	0.33	0.17	1.14	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.05	7.58	407	414	0.79	0.02	2.06	442
% Reduced	—	9%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.07	0.03	0.21	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	1.26	67.3	68.6	0.13	< 0.005	0.34	73.2

Mit.	0.03	0.06	0.03	0.21	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	1.26	67.3	68.6	0.13	< 0.005	0.34	73.2
% Reduced	—	9%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.17	0.16	0.17	1.05	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	239	239	0.01	0.01	0.71	244
Area	0.05	0.25	< 0.005	0.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.22	1.22	< 0.005	< 0.005	—	1.22
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	178	178	0.01	< 0.005	—	179
Water	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Waste	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Total	0.23	0.41	0.17	1.34	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	7.58	434	442	0.79	0.02	2.49	470
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.17	0.16	0.20	1.17	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	232	232	0.01	0.01	0.02	236
Area	—	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	178	178	0.01	< 0.005	—	179
Water	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Waste	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Total	0.17	0.36	0.20	1.17	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	7.58	426	433	0.79	0.02	1.79	462
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.16	0.14	0.16	0.99	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.05	—	212	212	0.01	0.01	0.28	216
Area	0.03	0.22	< 0.005	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.60	0.60	< 0.005	< 0.005	—	0.60
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	178	178	0.01	< 0.005	—	179
Water	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Waste	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Total	0.18	0.37	0.17	1.14	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.05	7.58	407	414	0.79	0.02	2.06	442
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.03	0.03	0.03	0.18	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	35.1	35.1	< 0.005	< 0.005	0.05	35.8
Area	< 0.005	0.04	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.10	0.10	< 0.005	< 0.005	—	0.10
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	29.5	29.5	< 0.005	< 0.005	—	29.6
Water	—	—	—	—	—	—	—	—	—	—	—	0.50	2.57	3.07	0.05	< 0.005	—	4.73
Waste	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.64
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29	0.29
Total	0.03	0.07	0.03	0.21	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	1.26	67.3	68.6	0.13	< 0.005	0.34	73.2

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.17	0.16	0.17	1.05	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	239	239	0.01	0.01	0.71	244
Area	0.05	0.21	< 0.005	0.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.22	1.22	< 0.005	< 0.005	—	1.22
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	178	178	0.01	< 0.005	—	179
Water	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Waste	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78

Total	0.23	0.37	0.17	1.34	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	7.58	434	442	0.79	0.02	2.49	470
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.17	0.16	0.20	1.17	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	232	232	0.01	0.01	0.02	236
Area	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	178	178	0.01	< 0.005	—	179
Water	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Waste	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Total	0.17	0.32	0.20	1.17	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	7.58	426	433	0.79	0.02	1.79	462
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.14	0.16	0.99	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.05	—	212	212	0.01	0.01	0.28	216
Area	0.03	0.19	< 0.005	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.60	0.60	< 0.005	< 0.005	—	0.60
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	178	178	0.01	< 0.005	—	179
Water	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Waste	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Total	0.18	0.33	0.17	1.14	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.05	7.58	407	414	0.79	0.02	2.06	442
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.03	0.03	0.03	0.18	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	35.1	35.1	< 0.005	< 0.005	0.05	35.8
Area	< 0.005	0.03	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.10	0.10	< 0.005	< 0.005	—	0.10
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	29.5	29.5	< 0.005	< 0.005	—	29.6
Water	—	—	—	—	—	—	—	—	—	—	—	0.50	2.57	3.07	0.05	< 0.005	—	4.73
Waste	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.64
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29	0.29
Total	0.03	0.06	0.03	0.21	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	1.26	67.3	68.6	0.13	< 0.005	0.34	73.2

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.00	1.68	15.4	17.7	0.03	0.58	—	0.58	0.53	—	0.53	—	2,919	2,919	0.12	0.02	—	2,929
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.84	0.97	< 0.005	0.03	—	0.03	0.03	—	0.03	—	160	160	0.01	< 0.005	—	160
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.5	26.5	< 0.005	< 0.005	—	26.6
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	1.11	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	189	189	0.01	0.01	0.69	192
Vendor	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	0.00
Hauling	0.01	0.01	0.32	0.06	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	252	252	< 0.005	0.04	0.47	265
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.0	10.0	< 0.005	< 0.005	0.02	10.2
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.01	14.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.66	1.66	< 0.005	< 0.005	< 0.005	1.68
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.29	2.29	< 0.005	< 0.005	< 0.005	2.40

3.2. Demolition (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.66	1.39	12.9	14.6	0.02	0.51	—	0.51	0.47	—	0.47	—	2,494	2,494	0.10	0.02	—	2,503
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.71	0.80	< 0.005	0.03	—	0.03	0.03	—	0.03	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.05	0.69	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	118	118	0.01	< 0.005	0.43	120
Vendor	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	0.00
Hauling	0.01	0.01	0.32	0.06	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	252	252	< 0.005	0.04	0.47	265

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.27	6.27	< 0.005	< 0.005	0.01	6.36
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.01	14.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	1.05
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.29	2.29	< 0.005	< 0.005	< 0.005	2.40

3.3. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.47	1.24	11.0	11.7	0.02	0.51	—	0.51	0.47	—	0.47	—	2,065	2,065	0.08	0.02	—	2,072
Dust From Material Movement	—	—	—	—	—	—	2.44	2.44	—	1.17	1.17	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	56.6	56.6	< 0.005	< 0.005	—	56.8
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.37	9.37	< 0.005	< 0.005	—	9.40
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.42	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	71.0	71.0	< 0.005	< 0.005	0.26	72.2
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.91
Vendor	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	0.00

Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Vendor	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	0.00
Hauling	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	0.00

3.4. Site Preparation (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.47	1.24	11.0	11.7	0.02	0.51	—	0.51	0.47	—	0.47	—	2,065	2,065	0.08	0.02	—	2,072
Dust From Material Movement	—	—	—	—	—	—	2.44	2.44	—	1.17	1.17	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	56.6	56.6	< 0.005	< 0.005	—	56.8
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—

Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.37	9.37	< 0.005	< 0.005	—	9.40
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.42	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	71.0	71.0	< 0.005	< 0.005	0.26	72.2
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.91
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Vendor	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	0.00
Hauling	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	0.00

3.5. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.59	3.02	27.0	27.1	0.06	1.11	—	1.11	1.02	—	1.02	—	6,526	6,526	0.26	0.05	—	6,548
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.22	2.23	< 0.005	0.09	—	0.09	0.08	—	0.08	—	536	536	0.02	< 0.005	—	538
Dust From Material Movement	—	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.40	0.41	< 0.005	0.02	—	0.02	0.02	—	0.02	—	88.8	88.8	< 0.005	< 0.005	—	89.1

Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	1.11	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	189	189	0.01	0.01	0.69	192
Vendor	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	0.00
Hauling	0.03	0.02	1.06	0.20	0.01	0.02	0.23	0.25	0.02	0.06	0.08	—	841	841	< 0.005	0.13	1.56	882
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.0	15.0	< 0.005	< 0.005	0.02	15.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	69.2	69.2	< 0.005	0.01	0.06	72.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.49	2.49	< 0.005	< 0.005	< 0.005	2.53
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.01	12.0

3.6. Grading (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.70	1.42	12.9	14.0	0.02	0.58	—	0.58	0.53	—	0.53	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.06	1.15	< 0.005	0.05	—	0.05	0.04	—	0.04	—	202	202	0.01	< 0.005	—	202
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.19	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	33.4	33.4	< 0.005	< 0.005	—	33.5
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.55	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	94.7	94.7	< 0.005	< 0.005	0.34	96.2
Vendor	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	0.00
Hauling	0.03	0.02	1.06	0.20	0.01	0.02	0.23	0.25	0.02	0.06	0.08	—	841	841	< 0.005	0.13	1.56	882
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.52	7.52	< 0.005	< 0.005	0.01	7.63
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	69.2	69.2	< 0.005	0.01	0.06	72.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.24	1.24	< 0.005	< 0.005	< 0.005	1.26
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.01	12.0

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.01	8.57	9.96	0.02	0.29	—	0.29	0.27	—	0.27	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.01	8.57	9.96	0.02	0.29	—	0.29	0.27	—	0.27	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.37	3.15	3.66	0.01	0.11	—	0.11	0.10	—	0.10	—	663	663	0.03	0.01	—	665
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.58	0.67	< 0.005	0.02	—	0.02	0.02	—	0.02	—	110	110	< 0.005	< 0.005	—	110
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.16	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	27.1	27.1	< 0.005	< 0.005	0.10	27.6
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	0.10	38.2
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.16	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.9	25.9	< 0.005	< 0.005	< 0.005	26.3
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	< 0.005	38.2
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.65	9.65	< 0.005	< 0.005	0.02	9.79
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.02	14.1
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.60	1.60	< 0.005	< 0.005	< 0.005	1.62
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.23	2.23	< 0.005	< 0.005	< 0.005	2.33
Hauling	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	0.00

3.8. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.01	8.57	9.96	0.02	0.29	—	0.29	0.27	—	0.27	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.01	8.57	9.96	0.02	0.29	—	0.29	0.27	—	0.27	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.37	3.15	3.66	0.01	0.11	—	0.11	0.10	—	0.10	—	663	663	0.03	0.01	—	665

Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.58	0.67	< 0.005	0.02	—	0.02	0.02	—	0.02	—	110	110	< 0.005	< 0.005	—	110
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.16	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	27.1	27.1	< 0.005	< 0.005	0.10	27.6
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	0.10	38.2
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.16	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.9	25.9	< 0.005	< 0.005	< 0.005	26.3
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	< 0.005	38.2
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.65	9.65	< 0.005	< 0.005	0.02	9.79
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.02	14.1
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.60	1.60	< 0.005	< 0.005	< 0.005	1.62
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.23	2.23	< 0.005	< 0.005	< 0.005	2.33
Hauling	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	0.00

3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.17	0.97	8.25	9.91	0.02	0.26	—	0.26	0.24	—	0.24	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.17	0.97	8.25	9.91	0.02	0.26	—	0.26	0.24	—	0.24	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	0.44	3.76	4.52	0.01	0.12	—	0.12	0.11	—	0.11	—	821	821	0.03	0.01	—	824
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.69	0.82	< 0.005	0.02	—	0.02	0.02	—	0.02	—	136	136	0.01	< 0.005	—	136
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	26.7	26.7	< 0.005	< 0.005	0.09	27.1
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.7	35.7	< 0.005	< 0.005	0.09	37.3
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.15	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.5	25.5	< 0.005	< 0.005	< 0.005	25.8
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.8	35.8	< 0.005	< 0.005	< 0.005	37.3
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.02	11.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.02	17.0
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.94	1.94	< 0.005	< 0.005	< 0.005	1.97
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.70	2.70	< 0.005	< 0.005	< 0.005	2.81
Hauling	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	0.00

3.10. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.17	0.97	8.25	9.91	0.02	0.26	—	0.26	0.24	—	0.24	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.17	0.97	8.25	9.91	0.02	0.26	—	0.26	0.24	—	0.24	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	0.44	3.76	4.52	0.01	0.12	—	0.12	0.11	—	0.11	—	821	821	0.03	0.01	—	824
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.69	0.82	< 0.005	0.02	—	0.02	0.02	—	0.02	—	136	136	0.01	< 0.005	—	136
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	26.7	26.7	< 0.005	< 0.005	0.09	27.1
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.7	35.7	< 0.005	< 0.005	0.09	37.3
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.15	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.5	25.5	< 0.005	< 0.005	< 0.005	25.8

Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.8	35.8	< 0.005	< 0.005	< 0.005	37.3
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.02	11.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.02	17.0
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.94	1.94	< 0.005	< 0.005	< 0.005	1.97
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.70	2.70	< 0.005	< 0.005	< 0.005	2.81
Hauling	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	0.00

3.11. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	0.46	4.30	6.49	0.01	0.17	—	0.17	0.16	—	0.16	—	992	992	0.04	0.01	—	995
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	0.46	4.30	6.49	0.01	0.17	—	0.17	0.16	—	0.16	—	992	992	0.04	0.01	—	995
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.35	0.53	< 0.005	0.01	—	0.01	0.01	—	0.01	—	81.5	81.5	< 0.005	< 0.005	—	81.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.5	13.5	< 0.005	< 0.005	—	13.5
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.65	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	116	116	0.01	< 0.005	0.40	118
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.07	0.66	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	111	111	0.01	< 0.005	0.01	113
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.23	9.23	< 0.005	< 0.005	0.01	9.36
Vendor	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	0.00

Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.53	1.53	< 0.005	< 0.005	< 0.005	1.55
Vendor	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	0.00
Hauling	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	0.00

3.12. Paving (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	0.46	4.30	6.49	0.01	0.17	—	0.17	0.16	—	0.16	—	992	992	0.04	0.01	—	995
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	0.46	4.30	6.49	0.01	0.17	—	0.17	0.16	—	0.16	—	992	992	0.04	0.01	—	995
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.35	0.53	< 0.005	0.01	—	0.01	0.01	—	0.01	—	81.5	81.5	< 0.005	< 0.005	—	81.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.5	13.5	< 0.005	< 0.005	—	13.5
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.65	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	116	116	0.01	< 0.005	0.40	118
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.07	0.66	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	111	111	0.01	< 0.005	0.01	113
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.23	9.23	< 0.005	< 0.005	0.01	9.36
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.53	1.53	< 0.005	< 0.005	< 0.005	1.55
Vendor	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	0.00
Hauling	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	0.00

3.13. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	5.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.0
Architectural Coatings	—	0.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.82	1.82	< 0.005	< 0.005	—	1.82
Architectural Coatings	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	5.09	5.09	< 0.005	< 0.005	< 0.005	5.16
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.42	0.42	< 0.005	< 0.005	< 0.005	0.43
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.07
Vendor	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	0.00
Hauling	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	0.00

3.14. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	1.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.0
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.82	1.82	< 0.005	< 0.005	—	1.82
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	5.09	5.09	< 0.005	< 0.005	< 0.005	5.16

Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.42	0.42	< 0.005	< 0.005	< 0.005	0.43
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.07
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.17	0.16	0.17	1.05	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	239	239	0.01	0.01	0.71	244
Other Non-Asphalt Surfaces	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	0.00

Other Asphalt Surfaces	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	0.00
Total	0.17	0.16	0.17	1.05	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	239	239	0.01	0.01	0.71	244
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.17	0.16	0.20	1.17	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	232	232	0.01	0.01	0.02	236
Other Non-Asphalt Surfaces	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	0.00
Other Asphalt Surfaces	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	0.00
Total	0.17	0.16	0.20	1.17	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	232	232	0.01	0.01	0.02	236
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.03	0.03	0.03	0.18	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	35.1	35.1	< 0.005	< 0.005	0.05	35.8
Other Non-Asphalt Surfaces	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	0.00
Other Asphalt Surfaces	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	0.00
Total	0.03	0.03	0.03	0.18	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	35.1	35.1	< 0.005	< 0.005	0.05	35.8

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.17	0.16	0.17	1.05	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	239	239	0.01	0.01	0.71	244
Other Non-Asphalt Surfaces	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	0.00
Other Asphalt Surfaces	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	0.00
Total	0.17	0.16	0.17	1.05	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	239	239	0.01	0.01	0.71	244
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.17	0.16	0.20	1.17	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	232	232	0.01	0.01	0.02	236
Other Non-Asphalt Surfaces	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	0.00
Other Asphalt Surfaces	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	0.00
Total	0.17	0.16	0.20	1.17	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	232	232	0.01	0.01	0.02	236
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.03	0.03	0.03	0.18	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	35.1	35.1	< 0.005	< 0.005	0.05	35.8
Other Non-Asphalt Surfaces	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	0.00
Other Asphalt Surfaces	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	0.00

Total	0.03	0.03	0.03	0.18	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	35.1	35.1	< 0.005	< 0.005	0.05	35.8

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	178	178	0.01	< 0.005	—	179
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	178	178	0.01	< 0.005	—	179
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	178	178	0.01	< 0.005	—	179
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	178	178	0.01	< 0.005	—	179

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	29.5	29.5	< 0.005	< 0.005	—	29.6
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	29.5	29.5	< 0.005	< 0.005	—	29.6

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	178	178	0.01	< 0.005	—	179
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	178	178	0.01	< 0.005	—	179
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	178	178	0.01	< 0.005	—	179
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	178	178	0.01	< 0.005	—	179
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	29.5	29.5	< 0.005	< 0.005	—	29.6
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	29.5	29.5	< 0.005	< 0.005	—	29.6

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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

Other Non-Asphalt Surfaces	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
Other Asphalt Surfaces	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
Total	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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
Other Non-Asphalt Surfaces	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
Other Asphalt Surfaces	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
Total	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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
Other Non-Asphalt Surfaces	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
Other Asphalt Surfaces	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
Total	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

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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
Other Non-Asphalt Surfaces	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
Other Asphalt Surfaces	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
Total	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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
Other Non-Asphalt Surfaces	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
Other Asphalt Surfaces	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
Total	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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
Other Non-Asphalt Surfaces	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

Other Asphalt Surfaces	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
Total	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

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.05	0.05	< 0.005	0.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.22	1.22	< 0.005	< 0.005	—	1.22
Total	0.05	0.25	< 0.005	0.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.22	1.22	< 0.005	< 0.005	—	1.22
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.10	0.10	< 0.005	< 0.005	—	0.10
Total	< 0.005	0.04	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.10	0.10	< 0.005	< 0.005	—	0.10

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.05	0.05	< 0.005	0.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.22	1.22	< 0.005	< 0.005	—	1.22
Total	0.05	0.21	< 0.005	0.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.22	1.22	< 0.005	< 0.005	—	1.22
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.10	0.10	< 0.005	< 0.005	—	0.10
Total	< 0.005	0.03	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.10	0.10	< 0.005	< 0.005	—	0.10

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.50	2.57	3.07	0.05	< 0.005	—	4.73
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.50	2.57	3.07	0.05	< 0.005	—	4.73

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.02	15.5	18.6	0.31	0.01	—	28.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.50	2.57	3.07	0.05	< 0.005	—	4.73
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	0.50	2.57	3.07	0.05	< 0.005	—	4.73

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.64
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.64

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.56	0.00	4.56	0.46	0.00	—	16.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.64
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.64

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29	0.29
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29	0.29

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29	0.29
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29	0.29

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	4/1/2026	4/29/2026	5.00	20.0	—
Site Preparation	Site Preparation	4/30/2026	5/14/2026	5.00	10.0	—
Grading	Grading	5/15/2026	6/26/2026	5.00	30.0	—
Building Construction	Building Construction	6/27/2026	8/21/2027	5.00	300	—
Paving	Paving	8/22/2027	10/1/2027	5.00	30.0	—
Architectural Coating	Architectural Coating	10/1/2027	11/11/2027	5.00	30.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

Building Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

Building Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	11.9	LDA,LDT1,LDT2
Demolition	Vendor	—	10.6	HHDT,MHDT
Demolition	Hauling	3.75	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	11.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.6	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT

Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	11.9	LDA,LDT1,LDT2
Grading	Vendor	—	10.6	HHDT,MHDT
Grading	Hauling	12.5	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	2.87	11.9	LDA,LDT1,LDT2
Building Construction	Vendor	1.12	10.6	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	11.9	LDA,LDT1,LDT2
Paving	Vendor	—	10.6	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.57	11.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.6	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	11.9	LDA,LDT1,LDT2
Demolition	Vendor	—	10.6	HHDT,MHDT

Demolition	Hauling	3.75	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	11.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.6	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	11.9	LDA,LDT1,LDT2
Grading	Vendor	—	10.6	HHDT,MHDT
Grading	Hauling	12.5	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	2.87	11.9	LDA,LDT1,LDT2
Building Construction	Vendor	1.12	10.6	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	11.9	LDA,LDT1,LDT2
Paving	Vendor	—	10.6	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.57	11.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.6	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	10,236	3,412	1,307

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	300	—
Site Preparation	0.00	0.00	16.3	0.00	—
Grading	3,000	400	67.5	0.00	—
Paving	0.00	0.00	0.00	0.00	2.13

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

General Light Industry	0.00	0%
Other Non-Asphalt Surfaces	1.13	0%
Other Asphalt Surfaces	1.00	10%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	1,499	0.03	< 0.005
2027	0.00	1,499	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Light Industry	33.8	13.6	34.1	11,312	263	105	265	87,824
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Light Industry	33.8	13.6	34.1	11,312	263	105	265	87,824
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	10,236	3,412	1,308

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)

General Light Industry	80,691	807	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	807	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	807	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	80,691	807	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	807	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	807	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	1,578,050	0.00
Other Non-Asphalt Surfaces	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	1,578,050	0.00
Other Non-Asphalt Surfaces	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	8.46	—
Other Non-Asphalt Surfaces	0.00	—
Other Asphalt Surfaces	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	8.46	—
Other Non-Asphalt Surfaces	0.00	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.4	annual days of extreme heat
Extreme Precipitation	3.90	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth

Wildfire	33.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A

Extreme Precipitation	1	1	1	2
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	35.2
AQ-PM	0.61
AQ-DPM	25.6
Drinking Water	39.8
Lead Risk Housing	53.8
Pesticides	55.6
Toxic Releases	1.24
Traffic	15.4

Effect Indicators	—
CleanUp Sites	63.1
Groundwater	80.1
Haz Waste Facilities/Generators	35.6
Impaired Water Bodies	33.2
Solid Waste	42.3
Sensitive Population	—
Asthma	75.8
Cardio-vascular	69.6
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	54.6
Housing	81.8
Linguistic	0.00
Poverty	88.7
Unemployment	60.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	9.085076351
Employed	2.194276915
Median HI	2.527909663
Education	—
Bachelor's or higher	28.11497498
High school enrollment	25.6255614

Preschool enrollment	90.00384961
Transportation	—
Auto Access	10.39394328
Active commuting	86.42371359
Social	—
2-parent households	28.17913512
Voting	62.01719492
Neighborhood	—
Alcohol availability	72.74477095
Park access	28.16630309
Retail density	15.77056333
Supermarket access	36.81509047
Tree canopy	80.75195688
Housing	—
Homeownership	36.03233671
Housing habitability	14.35904016
Low-inc homeowner severe housing cost burden	39.61247273
Low-inc renter severe housing cost burden	26.72911587
Uncrowded housing	52.91928654
Health Outcomes	—
Insured adults	54.27948159
Arthritis	0.0
Asthma ER Admissions	24.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0

Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	4.3
Cognitively Disabled	0.6
Physically Disabled	0.4
Heart Attack ER Admissions	30.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	53.4
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	11.1
SLR Inundation Area	0.0
Children	61.0
Elderly	9.3
English Speaking	89.5
Foreign-born	1.3
Outdoor Workers	43.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.5
Traffic Density	12.6

Traffic Access	0.0
Other Indices	—
Hardship	80.2
Other Decision Support	—
2016 Voting	29.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	58.0
Healthy Places Index Score for Project Location (b)	19.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Based on project characteristics.
Construction: Off-Road Equipment	.

Construction: Dust From Material Movement	.
Construction: Architectural Coatings	.
Construction: Paving	.
Operations: Architectural Coatings	.
Operations: Energy Use	.

APPENDIX B

Biological Study Report

City of Yreka
Wastewater Treatment Plant Improvement Project

BIOLOGICAL STUDY REPORT

City of Yreka Wastewater Treatment Plant Improvements Project

Yreka, Siskiyou County, California

Prepared for:

City of Yreka

Prepared by:

Donald Burk, Qualified Biologist

July 2024

032-84

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APPENDICES

1. INTRODUCTION

The purpose of this biological study report (BSR) is to identify and characterize sensitive biological resources likely to occur on the project sites. The information provided in this report will serve as a baseline study to assist in the preparation of subsequent environmental documentation.

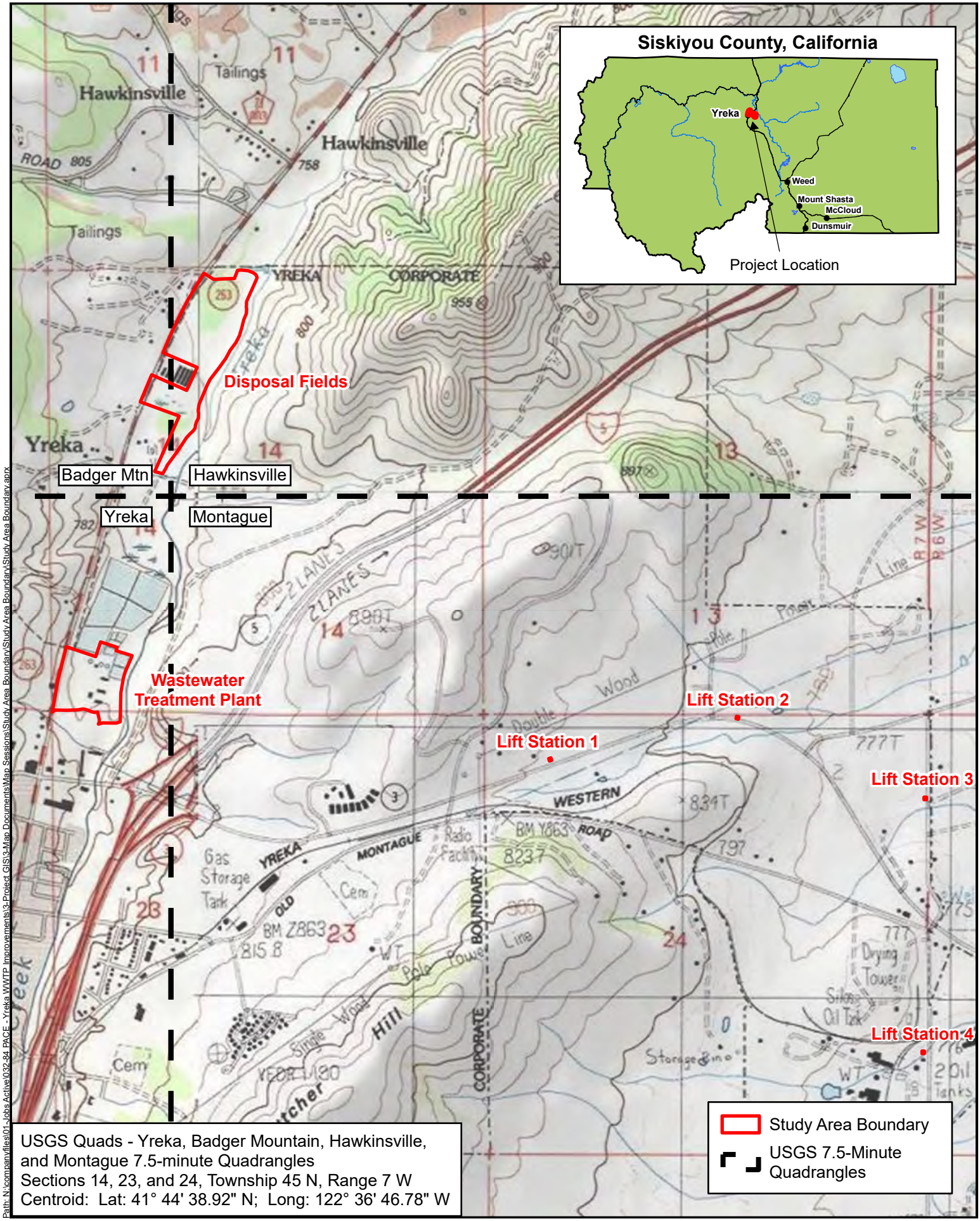
ENPLAN is an environmental consulting firm with over 40 years of experience with projects throughout northern California. All work associated with this project was performed by Donald Burk, Qualified Biologist and Environmental Services Manager with ENPLAN. As documented in **Appendix A,** Mr. Burk received his Master of Science degree in Botany, and Bachelor of Arts degree in Chemistry and Biological Sciences from California State University, Chico.

Having worked in the environmental consulting field since 1981, he has an in-depth background in a broad spectrum of environmental studies. His experience includes managing the preparation of CEQA/NEPA environmental compliance documents, environmental site assessments, wildlife and botanical studies, wetland delineations, reclamation plans, and stream restoration projects. Mr. Burk was responsible for conducting the field survey and preparing the final report.

2. PROJECT LOCATION

The proposed project consists of improvements to the City's wastewater treatment plant (WWTP), disposal fields, and to four lift stations. As shown in **Figure 1** (Project Location and Vicinity), the WWTP and disposal fields are located generally east of State Route (SR) 263/North Main Street, west of Yreka Creek, and north of SR 3 in Sections 14 and 23, Township 45 North, Range 7 West, of the U.S. Geological Survey's (USGS) Yreka, Badger Mountain, and Hawkinsville 7.5-minute quadrangles.

All four of the lift stations (LS) are located in Section 24, Township 45 North, Range 7 West, of the USGS Montague 7.5-minute quadrangle. LS 1 is located in the northwest corner of the intersection of Helweg Court and Montague Road/SR 3. LS 2 is located north of Montague Road/SR 3, ~370 feet east of Quarry Court. LS 3 is located on the east side of North Phillipe Lane, ~0.2 miles south of Yreka Ager Road.



USGS Quads - Yreka, Badger Mountain, Hawkinsville, and Montague 7.5-minute Quadrangles
Sections 14, 23, and 24, Township 45 N, Range 7 W
Centroid: Lat: 41° 44' 38.92" N; Long: 122° 36' 46.78" W

All depictions are approximate. Not a survey product. 10.20.23

0 2,000 Feet

Figure 1

Project Location and Vicinity

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LS 4 is located on the west side of South Phillipe Lane, south of the Yreka Western Railroad crossing.

Staging of construction equipment and materials would occur at the City's Corporation Yard, located immediately south of the WWTP.

3. PROJECT DESCRIPTION

This section describes the proposed improvements that are the subject of this BSR. **Figure 2** shows the study area for the WWTP and disposal fields. **Figures 3 and 4** show the study areas for the lift stations. Proposed improvements include the following:

Wastewater Treatment Plant (Figures 5 and 6)

- Headworks improvements would include the installation of flow meters on the influent flow lines and grinder upstream of the spiral screen. Minor piping improvements would be made to ensure that influent flow meters function properly.
- Improvements in Aeration Basin 1 and Aeration Basin 2 would include replacement of the 20 horsepower (HP) surface aerators with new 25 HP surface aerators (three aerators in each basin).
- Both secondary clarifiers would be improved with new launder cover and density current baffles. The drive units, energy dissipating inlet, flocculation feedwell, and scum removal equipment would be replaced.
- A polymer scale would be installed adjacent to each of the digesters.
- The RAS, WAS, scum, sludge, water, and drainage pumps would be replaced and upsized if additional capacity is needed.
- The existing chlorine contact basin would be demolished and filled in.
- A new disinfection facility would be constructed in the northern area of the WWTP property. Two options for disinfection are being considered in this location as described below. For both options, disinfected effluent would discharge into a new effluent discharge line.

Chlorine Disinfection: A new chlorine contact basin with baffled walls to create serpentine flow would be installed, similar to the existing chlorine contact basin.

Ultraviolet (UV) Disinfection: A new building would be constructed to house UV disinfection equipment, electrical components, and controls. It is anticipated that the UV facility would have a smaller footprint than the chlorine contact basin.

- A new filtration building would be constructed south of the new disinfection facility. The existing disk filtration facility would be demolished.

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All depictions are approximate. Not a survey product. 10.20.23

0 650 Feet

Figure 2

Study Area Boundary

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All depictions are approximate. Not a survey product. 10.20.23

0 250 Feet

Figure 3

Lift Stations 1 and 2

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All depictions are approximate. Not a survey product. 10.20.23

0 350 Feet

Figure 4

Lift Stations 3 and 4

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All depictions are approximate. Not a survey product. 10.20.23

0 150 Feet

Figure 5

Wastewater Treatment Plant Improvements

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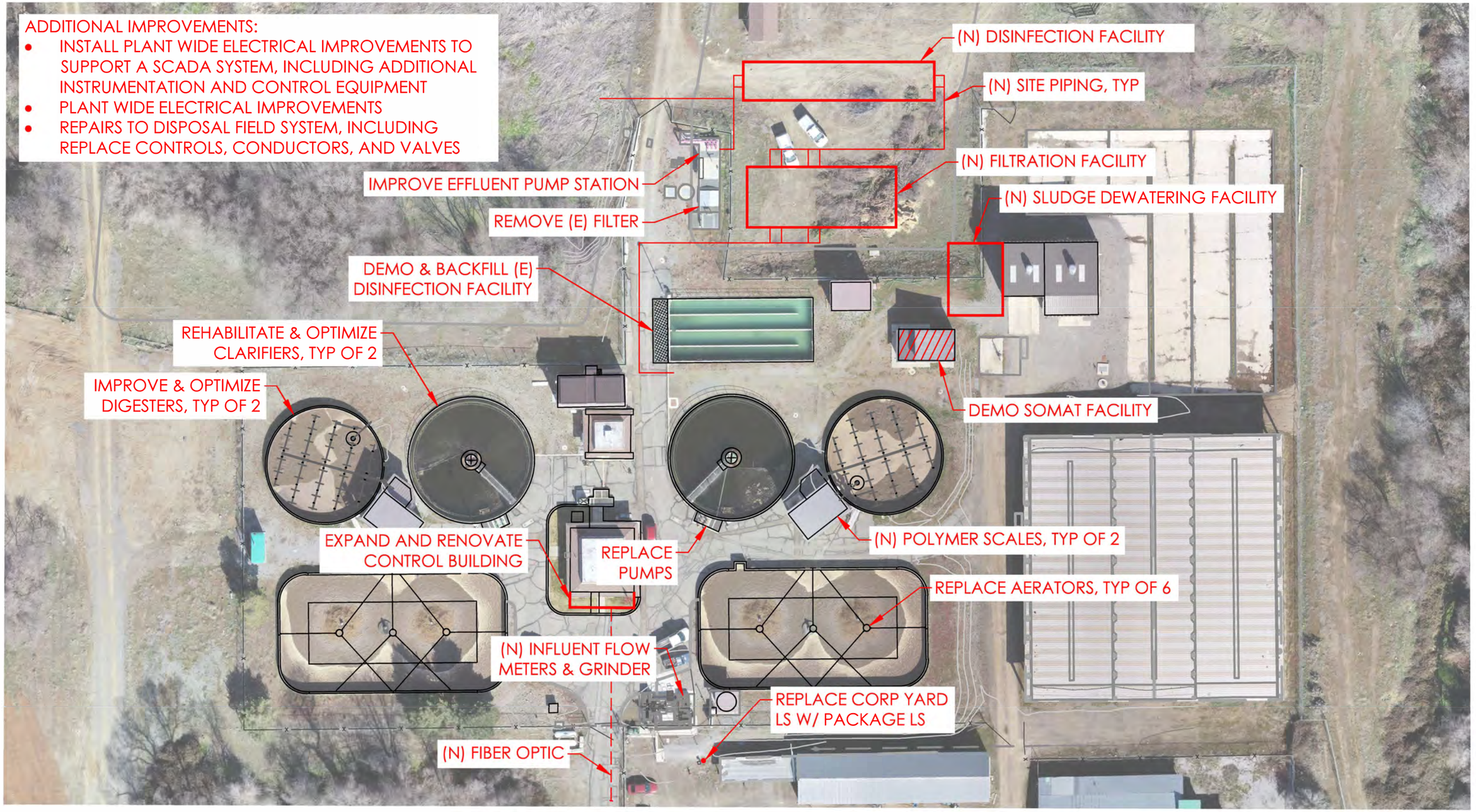
ADDITIONAL IMPROVEMENTS:

- INSTALL PLANT WIDE ELECTRICAL IMPROVEMENTS TO SUPPORT A SCADA SYSTEM, INCLUDING ADDITIONAL INSTRUMENTATION AND CONTROL EQUIPMENT
- PLANT WIDE ELECTRICAL IMPROVEMENTS
- REPAIRS TO DISPOSAL FIELD SYSTEM, INCLUDING REPLACE CONTROLS, CONDUCTORS, AND VALVES



0 50 100

1 IN = 50 FT

PACE® ENGINEERING

CITY OF YREKA
WWTP IMPROVEMENT PROJECT
SELECTED PROJECT - WWTP

FIGURE 6

DATE: 2/24

JOB # 69.61

Plot Date: February 23, 2024 - 9:25 am Login Name: CPaget
File Name: M:\Land Projects\0069\61 WWTP Improvements\01 CAD\03 SD\PER Figures\Fig 10_Selected Project_WWTP.dwg Layout: IMPROVEMENTS

- Coarse-bubble diffusers in both digesters would be replaced with fine-bubble diffusers. Instrumentation, controls, mechanical mixers, and an automated decanter would be installed to optimize operations.
- A new SCADA system would be installed at the WWTP. An existing ground-mounted antenna near the effluent pump station would be removed, and a new roof-mounted antenna would be installed on the control building.
- The control building would be expanded to house the new SCADA equipment. The roof of the control building would be replaced. Accessibility improvements would be completed in accordance with the Americans with Disabilities Act (ADA) and California Building Code.
- Electrical improvements would be completed throughout the WWTP.
- A new fiber optic line would be installed from the City's Corporation Yard to the WWTP Control Building (see **Figure 5**).
- A new package lift station would be installed immediately adjacent to the existing lift station, southeast of the existing headworks. Once the new lift station is operational, the existing lift station would be removed.
- A new sludge dewatering facility would be installed.
- The existing SOMAT facility would be demolished.

Disposal Fields (Figure 7)

- New electrical conduit and pull boxes would be installed in the disposal fields via open-cut trenching, and the existing moisture sensors, solenoid control valves, and concrete valve boxes, would be replaced.
- A new concrete masonry unit (CMU) building would be constructed adjacent to SR 263 to house the controls. Once the new CMU building is fully operational, the existing shed would be demolished and removed.
- The antenna on the existing control building would be replaced with an antenna on the new CMU building.

Lift Stations (Figures 3 and 4)

- At all four lift station locations, antennas on ground-mounted poles, cables, and radios would be installed, and minor modifications would be made to the existing control panels to support the SCADA system.

Study Area Boundary
Potential Disposal Building Locations
Conduit Alignments
Solenoid Control Valves
Moisture Sensors
Pull Boxes

0 175 Feet

All depictions are approximate. Not a survey product. 03.08.24

Figure 7

Disposal Fields Improvements

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4. AREA CHARACTERISTICS

The project area is situated at approximately 2,600 feet above mean sea level, on the western edge of the Shasta Valley in central Siskiyou County. Land uses in the vicinity of the WWTP and disposal fields include general commercial and commercial/light industrial uses. Yreka Creek is immediately east of the WWTP and disposal fields. Land uses in the vicinity of the four lift stations are residential agriculture, light industrial, and heavy industrial uses. LS 1 is in an industrial area. LS 2 is surrounded primarily by undeveloped open space. LS 3 and LS 4 are located adjacent to public road rights-of-way (ROWs) in rural areas developed with single-family residences. Residences nearest to the WWTP are ~700 feet northeast, on Deer Creek Way. Yreka High School is located ~0.3 miles southwest of the proposed WWTP improvements.

The staging area for construction equipment and vehicles would be at the City's Corporation Yard, located immediately south of the WWTP. It is surfaced with gravel and compacted earth and is frequently subject to heavy equipment traffic and material laydowns. The Corporation Yard has been used or staging for a number of projects, and continuation of this use for the proposed project would have no adverse biological impacts.

Six soil types are located within the project area: Dumps; Duzel gravelly loam, 5 to 9 percent slopes; Hilt sandy loam, 2 to 15 percent slopes; Salisbury clay loam, 2 to 15 percent slopes; Salisbury gravelly clay loam, 0 to 5 percent slopes; and Stoner gravelly sandy loam, 5 to 15 percent slopes. None of the soils are considered hydric (NRCS, 2023).

As a result of the field evaluation, three community types were identified: urban, perennial grassland, and montane riparian. Each of these communities is briefly described in Section 6. The urban habitat consists of paved roads, driveways, and developed areas on the WWTP property and LS sites. The grassland community occurs in the WWTP disposal fields. Montane riparian habitat is represented by patches of deciduous trees near the wastewater treatment facility and offsite along Yreka Creek. Representative photographs of the project study area are provided in **Appendix B**.

5. RECORDS REVIEW AND FIELD RECONNAISSANCE

5.1 Records Review

Records reviewed for this evaluation consisted of California Natural Diversity Database (CNDDB) records for special-status plants, animals, and natural communities within a 5-mile radius of the study area (see **Table 1**) (CDFW, 2024); California Native Plant Society (CNPS) records for the Badger Mountain, Hawkinsville, Montague, and Yreka 7.5-minute quadrangles (see **Table 2**) (CNPS, 2024); U.S. Fish and Wildlife Service (USFWS) records for federally listed, proposed, and Candidate plant and animal species under jurisdiction of the USFWS with the potential to occur in the study area (USFWS, 2024); USFWS records for birds of conservation concern (see **Appendix C**) (USFWS, 2024); National Marine Fisheries Service (NMFS) records for anadromous fish species under the jurisdiction of the NMFS (see **Appendix C**) (NMFS, 2024); soils records maintained by the U.S. Department of Agriculture's Natural Resources Conservation Service (USDA, n.d.), and National Wetlands Inventory (NWI) maps maintained by the U.S. Fish and Wildlife Service (USFWS, n.d.).

5.2 Field Reconnaissance

To determine the presence/absence of special-status plant and animal species, ENPLAN conducted botanical and wildlife surveys of the study areas on June 9, 2023. Most of the special-status plant species potentially occurring in the study area would have been evident at the time the fieldwork was conducted, while most special-status animal species potentially occurring in the project are would not have been evident at the time the fieldwork was conducted. However, determination of the potential presence of the species that would not have been detectable at the time of the field work could readily be made based on observed habitat characteristics.

The June 9, 2023, field survey also included an evaluation to identify wetlands and other waters of the U.S. and State in the study area. The field investigation was conducted in accordance with technical methods outlined in the *Corps of Engineers Wetlands Delineation Manual* (U.S. Department of the Army, Corps of Engineers, 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008a), and the *Field Guide to the Identification of the Ordinary High*

Water Mark (OHWM) in the Arid West Region of the Western United States (USACE, 2008b).

6. NATURAL COMMUNITIES

Review of CNDDB and USFWS records did not identify any sensitive natural communities within five miles of the project area. Review of NMFS records showed that the Badger Mountain, Hawkinsville, Montague, and Yreka USGS 7.5-minute quadrangles include designated critical habitat for Southern Oregon/Northern California Coast (SONCC) Coho Evolutionary Significant Unit (ESU) and Essential Fish Habitat (EFH) for Coho and Chinook salmon; however, there are no fish-bearing streams in the project site, and the project would not impact critical habitat for SONCC Coho salmon or EFH for Coho and Chinook salmon.

As outlined above, the principal natural communities in and/or adjacent to the study area are urban, perennial grassland, and montane riparian; each habitat type is described below in further detail.

6.1 Habitat Types

Urban. Urban habitat is characterized as natural habitat that has been converted to facilitate development or has been sufficiently altered by planting non-native vegetation. The urban habitat in the study area consists of paved roads, driveways, and developed areas on the WWTP property and LS sites. Overall, this habitat has low value to wildlife species. Urban habitat is not considered a sensitive natural community.

Perennial Grassland. Generally speaking, perennial grassland habitat is composed primarily of perennial grass species such as California oatgrass, Pacific hairgrass, and sweet vernalgrass. Species composition is largely the result of geographic location and weather. A variety of animals use perennial grassland for foraging and nesting. Such species include the common garter snake (*Thamnophis sirtalis*), western terrestrial garter snake (*Thamnophis elegans*), northern harrier (*Circus hudsonius*), California vole (*Microtus californicus*), American kestrel (*Falco sparverius*), black-tailed jackrabbit (*Lepus californicus*), and coyote (*Canus latrans*).

In the study area, the perennial grassland community occurs in the WWTP disposal fields. Representative species include tall fescue (*Festuca arundinacea*), bulbous bluegrass (*Poa bulbosa*), rye (*Secale cereale*), shortpod mustard (*Hirschfeldia incana*), dyer's-woad (*Isatis tinctoria*), and yellow star thistle (*Centaurea solstitialis*).

The grassland community was planted and is maintained to facilitate wastewater disposal. It is not a natural community as described in the California Department of Fish and Wildlife (CDFW) California Natural Communities List, nor is it a sensitive community. However, due to ponding, a low spot in the disposal fields supports approximately ¾-acre of wetland vegetation, including cattails and tules. This inclusion is further discussed below.

Montane Riparian. Montane riparian habitat usually occurs along streams or wetlands as a narrow band of dense, broad-leaved, deciduous trees, with a sparse understory. Montane riparian habitat has high value for wildlife species due to its vicinity to water sources and because it provides cover, migration corridors, and nesting and foraging opportunities. Montane riparian habitat may be associated with a variety of wetland types and other waters including lakes, ponds, seeps, bogs, meadows, rivers, and springs.

In the project area, montane riparian habitat is present immediately east of the wastewater disposal fields (along Yreka Creek) and in small patches at the WWTP. Riparian species present include black cottonwood (*Populus balsamifera* subsp. *trichocarpa*), white alder (*Alnus rhombifolia*), willows (*Salix* spp.), American dogwood (*Cornus sericea* subsp. *sericea*), mountain dogwood (*Cornus nuttallii*), common horsetail (*Equisetum arvense*), Oregon ash (*Fraxinus latifolia*), big-leaf maple (*Acer macrophyllum*), and Himalayan blackberry (*Rubus armeniacus*). The montane riparian community in the study area most closely resembles the *Populus trichocarpa* alliance (61.120.01), described in the CDFW California Natural Communities List, which is considered a sensitive natural community (CDFW, 2023).

6.2 Impacts to Sensitive Natural Communities, Wetlands, and Other Waters

As identified in Section 6.1 above, the montane riparian community is a sensitive natural community. The inclusion of wetland vegetation in the disposal fields is also evaluated as a potentially sensitive and/or regulated community.

Approximately 0.5 acres of montane riparian habitat is present at the WWTP site, as shown in **Figure 8**. The construction activity nearest to this riparian habitat is installation of an underground fiber-optic cable; trenching for the cable would be about 25 feet from the edge of the riparian vegetation.

As called for in **Mitigation Measure 1** high-visibility exclusionary flagging or other markers would be established at the edge of the riparian vegetation to ensure that it is not inadvertently affected by project implementation. Montane riparian vegetation is also present immediately east of the WWTP and disposal fields, along Yreka Creek. Because the vegetation is entirely outside the work area, no impacts are anticipated.

The ~¾--acre wetland vegetation inclusion in the disposal fields is in a low spot that appears to have been created as a result of grading the disposal fields. Because the area is moist or ponded throughout the growing season, it is not suitable for the discharge of wastewater. The feature is not a “Water of the United States” as defined by the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency because it is isolated with no connection to Yreka Creek or other waters. It is not a “natural community” as defined by CDFW because it is a created feature in a wastewater disposal field. For these same reasons, the feature is not a “Water of the State” regulated by the State Water Boards (R. Bey, SWRCB, pers. comm). Therefore, although edges or small portions of the feature may be disturbed during project construction, this is not a significant impact on a sensitive natural community or regulated water and no mitigation is warranted.

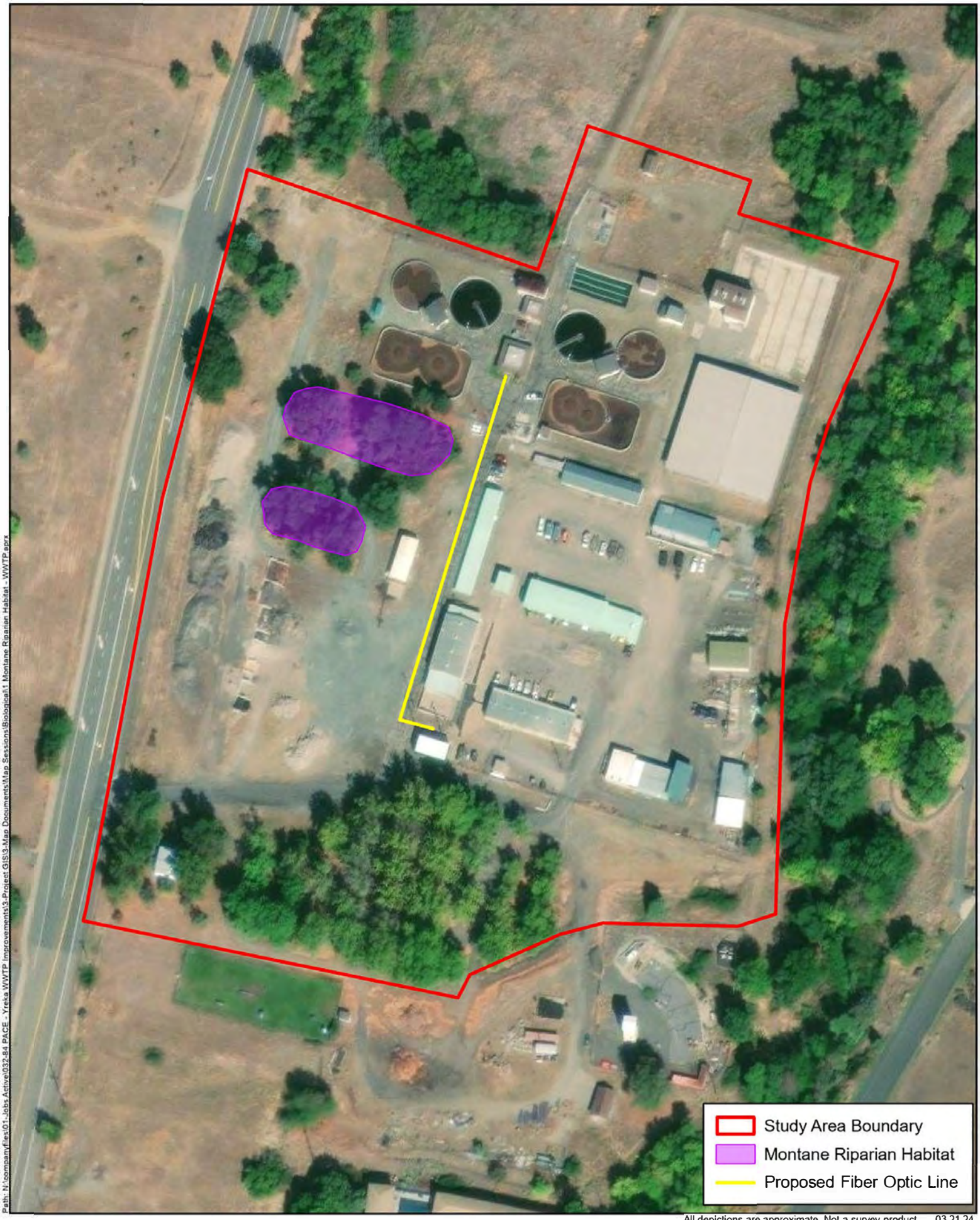

Figure 8

On-site Montane Riparian Habitat

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7. SPECIAL-STATUS SPECIES

7.1 Special-Status Plant Species

Review of the USFWS species list for the study area identified one federally listed plant species, Yreka phlox (Federally Endangered [FE], State Endangered [SE], California Rare Plant Rank [CRPR] 1B.2), as potentially occurring in the project area. The project area does not contain designated critical habitat for federally listed plant species.

Review of CNDDB records (**Table 1**) showed that no special-status plant species have been reported in the project site. The following special-status plant species have been reported within a five-mile radius of the study area: Alkali hymenoxys (CRPR 2B.2), blushing wild buckwheat (CRPR 1B.3), Oregon polemonium (CRPR 2B.2), Peck's lomatium (CRPR 2B.2), pendulous bulrush (CRPR 2B.2), serpentine cryptantha (CRPR 1B.2), Shasta orthocarpus (CRPR 1B.1), single-flowered mariposa-lily (CRPR 1A), Siskiyou clover (CRPR 1B.1), Siskiyou mariposa-lily (CRPR 1B.2, State Rare), subalpine aster (CRPR 2B.3), and woolly balsamroot (CRPR 1B.2). CNDDB records identified one non-status species within five miles of the study area, woolly meadowfoam (CRPR 4.2).

The CNPS Inventory of Rare and Endangered Plants was queried for occurrences within the Badger Mountain, Hawkinsville, Montague, and Yreka USGS 7.5-minute quadrangles. This review identified three additional special-status plant species as potentially occurring in the project area: Greene's mariposa-lily (CRPR 1B.2), Scott Mountain bedstraw (CRPR 1B.2), and Scott Valley phacelia (CRPR 1B.2). CNPS records also identified seven non-status species within these quadrangles: California androsace (CRPR 4.2), Howell's lewisia (CRPR 3.2), mountain lady's slipper (CRPR 4.2), Rydberg's spring beauty (CRPR 4.3), Siskiyou buckwheat (CRPR 4.3), Siskiyou onion (CRPR 4.3) and yellow triteleia (CRPR 4.3). The potential for each special-status plant species to occur on the project site is evaluated in **Table 3**. As documented in the table, none of these or any other special-status plant species were observed during the botanical survey, nor are any expected to be present. Included as **Appendix D** is a list of vascular plants observed during the botanical survey.

7.2 Special-Status Wildlife Species

Review of the USFWS species list for the study area (**Appendix C**) identified the following federally listed wildlife species as potentially occurring in the project site: conservancy fairy shrimp (Federally Endangered [FE]), Franklin's bumble bee (FE, State Candidate Endangered [SCE]), gray wolf (FE, SE), monarch butterfly (Federal Candidate [FC]), North American wolverine (Federally Proposed Threatened [FPT]), northern spotted owl (Federally Threatened [FT], State Candidate [SC], State Species of Special Concern [SSSC]), northwestern pond turtle (Federally Proposed Threatened [FPT], SSSC), vernal pool fairy shrimp (FT), vernal pool tadpole shrimp (FE), and yellow-billed cuckoo (FT, SE). The project area does not contain designated critical habitat for federally listed wildlife species.

Review of CNDDB records found that no special-status wildlife species have been reported in the project site. Six special-status wildlife species have been reported within a five-mile radius of the project site: American goshawk (SSSC), Crotch's bumble bee (SCE), Franklin's bumble bee (FE, SCE), greater sandhill crane (State Threatened [ST], State Fully Protected [SFP]), Lower Klamath marbled sculpin (SSSC), and western pond turtle (FPT, SSSC). CNDDB identified eight non-status species as occurring within a five-mile radius of the project site: great blue heron, highcap lanx, Morrison bumble bee, North American porcupine, Siskiyou shoulderband, Tehama chaparral, western pearlshell, and western ridged mussel (**Table 1**).

Review of the NMFS species list (**Appendix C**) identified one federally listed anadromous fish species, Southern Oregon/Northern California Coast (SONCC) Coho salmon Evolutionary Significant Unit (ESU), in the USGS Badger Mountain, Hawkinsville, Montague, and Yreka quadrangles.

The potential for each of the above special-status animal species to utilize the project site is evaluated in **Table 3**. Some of the special-status wildlife species would not have been evident at the time the fieldwork was conducted; however, determination of their potential presence could readily be made based on observed habitat characteristics. As documented in **Table 3**, no special-status animal species were observed during the wildlife survey. However, suitable habitat for one species, the monarch butterfly (*Danaus plexippus*), was observed in the project site and the species

could potentially be present at certain times of the year. Because various species of bumble bees have recently been added as Candidates for State listing, more detailed evaluations of these species are also provided below.

Monarch butterfly, Danaus plexippus, Federal Candidate Endangered

Monarch butterflies are reliant on milkweed species for development and survival. Adults migrate from their overwintering sites on the California Coast, Baja California, and to some extent the central Mexico mountains in February and March and reach the northern limit of their North American 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; adults typically 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.

Showy milkweed (*Asclepias speciosa*) and narrow-leaf milkweed (*Asclepias fascicularis*) were observed during the botanical survey. A patch of approximately ten plants of showy milkweed was observed near the north end of the wastewater disposal field. Several narrow-leaf milkweeds were found in the road shoulder near Lift Station 2. Given the known presence of milkweeds in the project study area, it is possible for monarch butterfly to utilize the project site as summer breeding habitat. However, with the implementation of **Mitigation Measure 2**, no adverse impacts to the species are anticipated.

Franklin's bumble bee (*Bombus franklini*), Federally Endangered, State Candidate Endangered

Franklin's bumble bee has a very limited geographic distribution. The species may be found 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*.

Although the project area occurs within the potential range of Franklin's bumble bee, the species was last observed in California in 1998. Bumble Bee Watch (The Xerces Society *et al.*, 2024) and iNaturalist (iNaturalist, n.d.) do not include any reports

of Franklin's bumble bee being found within a five-mile-radius of the project site. CNNDB records show one record of Franklin's bumble bee within a five-mile radius of the project area; however, the species was not observed during follow-up surveys in subsequent years. Because the project site has been previously disturbed and does not possess an abundance of floral resources, Franklin's bumble bee is not expected to be present or adversely affected by project implementation.

Crotch's bumble bee (*Bombus crotchii*), State Candidate Endangered

Crotch's bumble bees occur in California, southwestern Nevada, and Baja California. The bees inhabit open grassland and scrub habitats. Important food plants include *Asclepias, Chaenactis, Lupinus, Phacelia,* and *Salvia*. Colonies are annual; only mated queens overwinter. Queens emerge from hibernation in early spring, begin foraging, and search for a nest site. Nesting occurs underground. The queen provides all care for the colony until the first workers emerge and assist with these duties. The flight period for queens is from late February to late October, peaking in early April, with a second pulse in July. The flight period for workers and males is from late March through September, peaking in early July.

While the project area is within the historic range of Crotch's bumble bee it is not within the current known active range of the species (CDFW, 2023a). Bumble Bee Watch (The Xerces Society *et al.*, 2024) and iNaturalist (iNaturalist, n.d.) contain no records of Crotch's bumble bees within a five-mile-radius of the project site. CNDDB records indicate that Crotch's bumble bee was previously observed on one occasion in the general project area, but the exact location is unknown. Because the project site has been previously disturbed and does not possess an abundance of floral resources, Crotch's bumble bee is not expected to be present or adversely affected by project implementation.

Western bumble bee (*Bombus occidentalis*), State Candidate Endangered

Western bumble bees are found in meadows and grasslands with abundant floral resources. In California, the species is largely confined to high-elevation sites in the Sierra Nevada and scattered sites on the coast. The flight period is generally from early February to late November. Nests are primarily in underground cavities on open west-southwest slopes bordered by trees, although a few aboveground nests have been

reported. Very little is known about overwintering sites; however, the species has been reported in overwintering sites that were two inches deep in a “steep west slope of the mound of earth.”

While the project area is within the historic range of the western bumble bee, it is not within the current known active range of the species (CDFW, 2023b). Bumble Bee Watch (The Xerces Society *et al.*, 2024) and iNaturalist (iNaturalist, n.d.) contain no records of western bumble bees within a five-mile-radius of the project site. CNDDB records indicate that western bumble bee was previously observed on one occasion in the general project area, but the exact location is unknown. Because the project site has been previously disturbed and does not possess an abundance of floral resources, western bumble bee is not expected to be present or adversely affected by project implementation.

8. NESTING BIRDS

Under the Migratory Bird Treaty Act (MBTA) of 1918, migratory bird species, their nests, and their eggs are protected from injury or death, and any project-related disturbances during the nesting period. In addition, California Fish and Game Code §3503 and §3503.5 provide regulatory protection to resident and migratory birds and all birds of prey within the State.

The USFWS identified the following migratory Birds of Conservation Concern as potentially being affected by the proposed project: bald eagle, California gull, Cassin’s finch, evening grosbeak, golden eagle, lesser yellowlegs, oak titmouse, olive-sided flycatcher, rufous hummingbird, and wrentit. The potential for each of these species to utilize the project sites is evaluated in **Table 4.**

The project area is located within the Pacific Flyway, and it is possible that migratory birds could nest in or adjacent to the project area. Nesting birds, if present, could be directly or indirectly affected by construction activities. Direct effects could include mortality resulting from removal of a tree/shrub containing 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 **Mitigation Measure 3**, the potential for adversely affecting nesting birds can be avoided/minimized by requiring that vegetation removal and other ground-disturbance activities associated with construction occur between September 1 and January 31. If this is not possible, a nesting survey shall be conducted by a qualified biologist within one week prior to removal of vegetation and/or the start of construction. If active nests are found on the project site, the City shall implement measures to comply with the MBTA and California Fish and Game Code. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures, and ongoing biological monitoring.

9. NOXIOUS WEEDS

The introduction and spread of noxious weeds during construction activities has the potential to adversely affect sensitive habitats. A noxious weed is a plant that has been defined as a pest by federal or state law. In California, the California Department of Food and Agriculture (CDFA, 2021) maintains a list of plants that are considered threats to the well-being of the state. Each noxious weed identified by the CDFA receives a rating which reflects the importance of the pest, the likelihood that eradication or control efforts would be successful and the present distribution of the pest within the State (CDFA, n.d.). Below is a description of ratings categories applied by CDFA:

> **Category A**. A pest of known economic or environmental detriment that is either not known to be established in California or it is present in a limited distribution that allows for the possibility of eradication or successful containment. A-rated pests are prohibited from entering the state because they have been determined to be detrimental to agriculture.
>
> **Category B**. A pest of known economic or environmental detriment and, if present in California, is of limited distribution. B-rated pests are eligible to enter the state if the receiving county has agreed to accept them.
>
> **Category C.** A pest of known economic or environmental detriment and, if present in California, it is usually widespread. C-rated organisms are eligible to enter the state as long as the commodities with which they are associated conform to pest cleanliness standards when found in nursery stock shipments.

According to California Invasive Plant Council (Cal-IPC, 2023) records, two of the plant species observed in the project area during the botanical survey have a CFDA week ranking (in Category C): downy brome and Klamath weed. An additional 12 observed plant species were listed with Cal-IPC invasiveness ratings between "moderate" and "high": poison hemlock, yellow star-thistle, shortpod mustard, Dyer's-woad, lens-podded hoary cress, wild teasel, ripgut grass, medusahead, tall fescue, foxtail fescue, foxtail barley, and Himalayan blackberry. These weeds 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 if unwashed construction vehicles are used from outside of the County. As required by **Mitigation Measure 4**, the potential for introduction and spread of noxious weeds would 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. Implementation of **Mitigation Measure 4** reduces potential impacts related to the introduction and spread of noxious weeds to be less than significant.

10. CONCLUSIONS AND RECOMMENDATIONS

Based on the records search results, field observations, and the above analyses, we find that the proposed project could result in inadvertent entry into montane riparian wetlands, could adversely affect breeding monarch butterflies, has the potential to affect nesting birds (if present), and could result in the introduction and spread of noxious weeds. Implementation of conditions of regulatory agency permits, and implementation of the following mitigation measures would reduce the potential biological resource impacts of the proposed project to a less-than-significant level.

Mitigation Measure 1: Montane Riparian Habitat Avoidance

Potential impacts to montane riparian habitat in the project site shall be avoided by installing high-visibility markers along the outer edges of the construction zone adjacent to montane riparian habitat at the wastewater treatment plant site. The high-visibility markers shall consist of marking whiskers, pin flags, stakes with flagging tape, or similar

markers; marker locations shall be determined by a qualified biologist in consultation with the project engineer and the City of Yreka. No construction activities (e.g., clearing, grading, trenching, etc.), including vehicle parking and materials stockpiling, shall occur within the marked area. The exclusionary markers shall be periodically inspected during the construction period to ensure the markers are properly maintained. The markers shall be removed upon completion of work.

Mitigation Measure 2: Monarch Butterflies

The monarch butterfly is currently designated as a candidate species for federal listing under the Federal Endangered Species Act. If the western migratory population of the monarch butterfly remains a candidate or is formally designated as proposed, threatened, or endangered at the time of construction, the following measures shall be implemented as applicable:

a. A field survey shall be undertaken in early to mid-May (prior to arrival of the butterflies) to determine if milkweeds (*Asclepias* spp.) are present in or adjacent to the work area. If no milkweeds are present, no further action is required.

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

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

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

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

    ii. If no mitigation banking or in-lieu fee program is approved by the USFWS prior to project initiation, milkweeds shall be reestablished in the immediate area in the fall or spring following completion of construction. This shall be accomplished by planting seeds or rooted milkweed seedlings. The planted milkweeds shall be of the same species as those

removed. Planting shall be conducted at a sufficiently high ratio to ensure success, which is defined as establishing at least one milkweed plant per milkweed plant removed as determined through field monitoring one year after the milkweed planting is undertaken. If the minimum success ratio is not met, milkweed seeding/planting shall continue in successive years until the success criterion is met. Documentation regarding milkweed reestablishment and success shall be provided to the federal lead agency on an annual basis until the success criterion is met.

Mitigation Measure 3: Nesting Birds

In order to avoid impacts to nesting birds and raptors protected under the federal Migratory Bird Treaty Act (MBTA) 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 account for acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds.

   At a minimum, the survey report shall include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed in the area, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.).

   The results of the survey shall be submitted to the California Department of Fish and Wildlife (CDFW) upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

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

Mitigation Measure 4: Minimize the Introduction and Spread of Noxious Weeds

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

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

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

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

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

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TABLES

TABLE 1
Rarefind (CNDDB) Report Summary
City of Yreka Wastewater Treatment Plant Improvements Project
Five-Mile Radius of Project Area
July 2024

Listed Element	Quadrangle [1]				Status [2]
	BAD	HAW	MON	YRE	
ANIMALS					
American goshawk				•	SSSC
Crotch's bumble bee			•		SCE
Franklin's bumble bee			•		FE, SCE
Great blue heron		•			None
Greater sandhill crane					ST, SFP
Highcap lanx		•			None
Lower Klamath marbled sculpin		•	•	•	SSSC
Morrison's bumble bee			•		None
North American porcupine	•	•	•	•	None
Siskiyou shoulderband		•			None
Tehama chaparral		•			None
Western pearlshell		•			None
Western pond turtle		•	•	•	FPT, SSSC
Western ridged mussel	•	•			None
PLANTS					
Alkali hymenoxys			•	•	2B.2
Blushing wild buckwheat				•	1B.3
Oregon polemonium				•	2B.2
Peck's lomatium			•		2B.2
Pendulous bulrush				•	2B.2
Serpentine cryptantha				•	1B.2
Shasta orthocarpus				•	1B.1
Single-flowered mariposa-lily			•		1A
Siskiyou clover			•		1B.1
Siskiyou mariposa-lily				•	1B.2, SR
Subalpine aster				•	2B.3
Woolly balsamroot			•	•	1B.2
Woolly meadowfoam				•	4.2
Yreka phlox			•	•	FE, SE, 1B.2

Highlighting denotes the quadrangle in which the project site is located

[1]QUADRANGLE CODE

BAD	Badger Mountain	MON	Montague
HAW	Hawkinsville	YRE	Yreka

[2]STATUS CODES

Federal

FE	Federally Listed – Endangered
FT	Federally Listed – Threatened
FC	Federal Candidate Species
FCE	Federal Candidate Species - Endangered
FCT	Federal Candidate Species - Threatened
FP	Federal Proposed Species
FD	Federally Delisted
FSC	Federal Species of Concern

State

SFP	State Fully Protected
SR	State Rare
SE	State Listed – Endangered
ST	State Listed – Threatened
SC	State Candidate Species
SCE	State Candidate Species - Endangered
SCT	State Candidate Species - Threatened
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 Badger Mountain, Hawkinsville, Montague, and Yreka 7.5-minute Quadrangles

Common Name	Scientific Name	CA Rare Plant Rank	Blooming Period	State Listing Status	Federal Listing Status
Alkali hymenoxys	*Hymenoxys lemmonii*	2B.2	(May) Jun-Aug (Sep)	None	None
Blushing wild buckwheat	*Eriogonum ursinum* var. *erubescens*	1B.3	Jun-Sep	None	None
California androsace	*Androsace elongata* ssp. *acuta*	4.2	Mar-Jun	None	None
Greene's mariposa-lily	*Calochortus greenei*	1B.2	Jun-Aug	None	None
Howell's lewisia	*Lewisia cotyledon* var. *howellii*	3.2	Apr-Jul	None	None
Mountain lady's-slipper	*Cypripedium montanum*	4.2	Mar-Aug	None	None
Oregon polemonium	*Polemonium carneum*	2B.2	Apr-Sep	None	None
Peck's lomatium	*Lomatium peckianum*	2B.2	Apr-May(Jun)	None	None
Pendulous bulrush	*Scirpus pendulus*	2B.2	Jun-Aug	None	None
Rydberg's spring beauty	*Claytonia obovata*	4.3	(Mar-Apr) May-Jun (Jul)	None	None
Scott Mountain bedstraw	*Galium serpenticum* ssp. *scotticum*	1B.2	May-Aug	None	None
Scott Valley phacelia	*Phacelia greenei*	1B.2	Apr-Jun	None	None
Serpentine cryptantha	*Cryptantha dissita*	1B.2	Apr-Jun	None	None
Shasta orthocarpus	*Orthocarpus pachystachyus*	1B.1	May	None	None
Single-flowered mariposa-lily	*Calochortus monanthus*	1A	Jun	None	None
Siskiyou buckwheat	*Eriogonum siskiyouense*	4.3	(Jun) Jul-Sep	None	None
Siskiyou clover	*Trifolium siskiyouense*	1B.1	Jun-Jul	None	None
Siskiyou mariposa-lily	*Calochortus persistens*	1B.2	Jun-Jul	CR	None
Siskiyou onion	*Allium siskiyouense*	4.3	(Apr) May-Jul	None	None
Subalpine aster	*Eurybia merita*	2B.3	July-Aug	None	None
Woolly balsamroot	*Balsamorhiza lanata*	1B.2	Apr-Jun	None	None
Woolly meadowfoam	*Limnanthes floccosa* ssp. *floccosa*	4.2	Mar-May (Jun)	None	None
Yellow triteleia	*Triteleia crocea* var. *crocea*	4.3	May-Jun	None	None
Yreka phlox	*Phlox hirsuta*	1B.2	Apr-Jun	SE	FE

Source: *California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5).* https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants. *Accessed July 2024.*

Rare Plant Rank	
1A	Plants presumed extinct in California and either rare or extinct elsewhere
1B	Plants rare, threatened or endangered in California and elsewhere
2A	Plants presumed extinct in California but common elsewhere
2B	Plants rare, threatened, or endangered in California but common elsewhere
3	Review List: Plants about which more information is needed (generally not considered special-status, unless unusual circumstances warrant)
4	Watch List: Plants of limited distribution (generally not considered special-status, unless unusual circumstances warrant)
Rare Plant Threat Rank	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California
State Status	
CR	State Listed - Rare
CE	State Listed - Endangered
Federal Status	
FE	Federally Endangered

TABLE 3
Potential for Federal and State Special-Status Species to Occur on the Project Site
March 2024

COMMON NAME	SCIENTIFIC NAME	STATUS	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 found between 800 and 3,300 feet in elevation. The flowering period is June through September.	No	No	No	No suitable habitat for alkali hymenoxys is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Blushing wild buckwheat	*Eriogonum ursinum* var. *erubescens*	1B.3	Blushing wild buckwheat occurs on scree or talus slopes in lower montane coniferous forests and in montane chaparral. The species is found between 2,460 and 6,300 feet in elevation. The flowering period is June through September.	No	No	No	No suitable habitat for blushing wild buckwheat is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Greene's mariposa-lily	*Calochortus greenei*	1B.2	Greene's mariposa-lily is a perennial bulbiferous herb that occurs in cismontane woodland, meadows and seeps, pinyon and juniper woodland, and upper montane coniferous forests. The species is found between 3,395 and 6,200 feet in elevation. The flowering period is June through August.	No	No	No	The closest known occurrence of Greene's mariposa-lily to the project site is ±7.5 miles northeast. There is no suitable habitat for Greene's mariposa-lily on the project site. The species was not observed during the botanical survey and is not expected to be present.
Oregon polemonium	*Polemonium carneum*	2B.2	Oregon polemonium occurs in coastal prairie, coastal scrub, and in lower montane coniferous forest. The species is reported from sea level to 6,000 feet in elevation. The flowering period is April through September.	No	No	No	No suitable habitat for Oregon polemonium is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
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 found between 2,300 and 5,900 feet in elevation. The flowering period is April and May.	No	No	No	No suitable habitat for Peck's lomatium is present on the project site. The species was not observed during the botanical survey and is not expected to be present.

TABLE 3
Potential for Federal and State Special-Status Species to Occur on the Project Site
March 2024

COMMON NAME	SCIENTIFIC NAME	STATUS	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Pendulous bulrush	*Scirpus pendulus*	2B.2	Pendulous bulrush occurs near meadows, seeps, and freshwater marshes in Siskiyou County. The species is found between 2,600 and 3,300 feet in elevation. The flowering period is June through August.	No	No	No	No suitable habitat for pendulous bulrush is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Scott Mountain bedstraw	*Galium serpenticum* ssp. *scotticum*	1B.2	Scott Mountain bedstraw occurs on steep serpentine talus slopes in lower montane coniferous forest in Siskiyou and Trinity counties. The species is found between 3,200 and 7,000 feet above sea level. The flowering period is May through August.	No	No	No	No suitable habitat for Scott Mountain bedstraw is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Scott Valley phacelia	*Phacelia greenei*	1B.2	Scott Valley phacelia generally occurs on bare, gravelly serpentine ridges and slopes in montane coniferous forests. The species is found between 2,600 and 8,000 feet in elevation. The flowering period is April through June.	No	No	No	No suitable habitat for Scott Valley phacelia is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Serpentine cryptantha	*Cryptantha dissita*	1B.2	Serpentine cryptantha is an annual herb that occurs in serpentinite chaparral. The species is found between 1,200 and 1,900 feet in elevation. The flowering period is April through June.	No	No	No	No suitable habitat for serpentine cryptantha is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Shasta orthocarpus	*Orthocarpus pachystachyus*	1B.1	Shasta orthocarpus occurs in Great Basin scrub, meadows and seeps, and valley and foothill grassland. The species is reported at approximately 2,700 feet in elevation. The species flowers in May.	No	No	No	No suitable habitat for Shasta orthocarpus is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Single-flowered mariposa-lily	*Calochortus monanthus*	1A	Single-flowered mariposa-lily is known only from a riparian meadow along the Shasta River in Siskiyou County. The species is found between 2,400 and 2,700 feet in elevation. The flowering period is June.	No	No	No	No suitable habitat for single-flowered mariposa-lily is present on the project site. The species was not observed during the botanical survey and is not expected to be present.

TABLE 3
Potential for Federal and State Special-Status Species to Occur on the Project Site
March 2024

COMMON NAME	SCIENTIFIC NAME	STATUS	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Siskiyou clover	*Trifolium siskiyouense*	1B.1	Siskiyou clover is a perennial herb that generally occurs in mountain meadows, seeps, or along streambanks between 2,800 and 4,900 feet in elevation. The species has been reported in southern Oregon and northern California but has not been documented in Oregon since 1926 or in California since 1935. Flowering occurs in June and July.	No	No	No	No suitable habitat for Siskiyou clover is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Siskiyou mariposa-lily	*Calochortus persistens*	1B.2	Siskiyou mariposa-lily occurs on exposed, dry, rocky ridge tops of metavolcanic origin in lower montane coniferous forests in Siskiyou County. The species is found between 3,300 and 6,100 feet in elevation. The flowering period is June and July.	No	No	No	No suitable habitat for Siskiyou mariposa-lily is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Subalpine aster	*Eurybia merita*	2B.3	Subalpine aster, a perennial herb, occurs on moist soils in upper montane coniferous forest. The species is found between 4,000 and 6,300 feet in elevation. The flowering period is July and August.	No	No	No	No suitable habitat for subalpine aster is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Woolly balsamroot	*Balsamorhiza lanata*	1B.2	Woolly balsamroot, a perennial herb, occurs in open areas and grassy slopes in cismontane woodland in Siskiyou County. The species is found between 2,600 and 6,300 feet. The flowering period is April through June.	No	No	No	No suitable habitat for woolly balsamroot is present on the project sites. The species was not observed during the botanical survey and is not expected to be present.
Yreka phlox	*Phlox hirsuta*	FE, SE, 1B.2	Yreka phlox is a low-growing perennial plant that grows in soils derived from igneous rock with high levels of iron and magnesium. This species is known from only five locations in Siskiyou County, in and near the City of Yreka. The species is found between 2,400 and 4,400 feet in elevation and may be at a particular risk from human land use activities. The flowering period is April through June.	No	No	No	No suitable habitat for Yreka phlox is present on the project site. The species was not observed during the botanical survey and is not expected to be present.

TABLE 3
Potential for Federal and State Special-Status Species to Occur on the Project Site
March 2024

COMMON NAME	SCIENTIFIC NAME	STATUS	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
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 sites. Vernal pool fairy shrimp would thus not be present.
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							
American goshawk	*Accipiter atricapillus*	SSSC	American goshawks generally nest on north-facing slopes near water in old-growth coniferous and deciduous forests. Goshawks re-use old nests and maintain alternate nest sites.	No	No	No	No suitable nesting habitat for American goshawks is present on the project site. Thus, the northern goshawk is not expected to nest on the project site.
Greater sandhill crane	*Antigone canadensis tabida*	ST, SFP	Greater sandhill cranes nest in wetland habitats near grain fields in northeastern California. Nests consist of large mounds of vegetation in shallow water, natural hummocks, or muskrat houses. Shallow islands bordered by tules and cattails are ideal nesting sites.	No	No	No	No suitable nesting habitat is present on the project site for the greater sandhill crane. Therefore, this species is not expected to nest on the project site.
Northern spotted owl	*Strix occidentalis caurina*	FT, SC, SSSC	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	No old-growth forest or potentially suitable nesting trees/snags are present on the project site. Thus, the spotted owl is not expected to nest on the project site.

TABLE 3
Potential for Federal and State Special-Status Species to Occur on the Project Site
March 2024

COMMON NAME	SCIENTIFIC NAME	STATUS	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Western 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 habitat for western yellow-billed cuckoos is present on the project site. Thus, the yellow-billed cuckoo is not expected to nest on the project site.
REPTILES							
Western pond turtle	*Emys marmorata*	FPT, SSSC	The western pond turtle associates with permanent or nearly permanent water in a variety of habitats. This turtle is typically found in quiet water environments. Pond turtles require basking sites such as partially submerged logs, rocks, or open mud banks, and suitable (sandy banks or grassy open fields) upland habitat for egg-laying. Nesting and courtship typically occur during spring. Nests are generally constructed within 500 feet of a waterbody. Pond turtles leave aquatic sites in the fall and overwinter in uplands nearby. Pond turtles return to aquatic sites in spring.	No	No	No	No permanent or nearly permanent water occurs in the project site. Western pond turtle was not observed during the wildlife survey and is not expected to be present.

TABLE 3
Potential for Federal and State Special-Status Species to Occur on the Project Site
March 2024

COMMON NAME	SCIENTIFIC NAME	STATUS	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
INSECTS							
Crotch's bumble bee	*Bombus crotchii*	SCE	Crotch's bumble bees occur in California, southwestern Nevada and Baja California. The bees inhabit open grassland and scrub habitats. Important food plants include *Asclepias, Chaenactis, Lupinus, Phacelia*, and *Salvia*. Colonies are annual; only mated queens overwinter. Queens emerge from hibernation in early spring, begin foraging, and search for a nest site. Nesting occurs underground. The queen provides all care for the colony until the first workers emerge and assist with these duties. The flight period for queens is from late February to late October, peaking in early April, with a second pulse in July. The flight period for workers and males is from late March through September; peaking in early July.	No	No	No	The project area is not within the current known occupied range of Crotch's bumble bee. The site does not possess an abundance of floral resources; therefore, Crotch's bumble bee would not be affected by project implementation.
Franklin's bumble bee	*Bombus franklini*	FE, SCE	Franklin's bumble bee has a very limited geographic distribution. The species may be found 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	Although the project areas is within the potential range of Franklin's bumble bee, the species was last observed in California in 1998. Franklin's bumble bees rely on flowering plants for food. The project area does not possess an abundance of floral resources; therefore, the species would not be affected by project implementation.

TABLE 3
Potential for Federal and State Special-Status Species to Occur on the Project Site
March 2024

COMMON NAME	SCIENTIFIC NAME	STATUS	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Western bumble bee	*Bombus occidentalis*	SCE	Western bumble bees are found in meadows and grasslands with abundant floral resources. In California, the species is largely confined to high-elevation sites in the Sierra Nevada and scattered sites on the coast. The flight period is generally from early February to late November. Nests are primarily in underground cavities on open west-southwest slopes bordered by trees, although a few aboveground nests have been reported. Very little is known about overwintering sites; however, the species has been reported in overwintering sites that were two inches deep in a "steep west slope of the mound of earth."	No	No	No	The project site is not within the current known active range of the species. Western bumble bees rely on flowering plants for food. The project area does not possess an abundance of floral resources; therefore, the population would not be affected by project implementation.
Monarch butterfly–California overwintering population	*Danaus plexippus* pop. 1	FC	Monarch butterflies are reliant on milkweed species for development and survival. Adults migrate from their overwintering sites on the California Coast, Baja California, and to some extent the central Mexico mountains in February and March and reach the northern limit of their North America 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; 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.	Yes	No	Pot.	Showy milkweed (*Asclepias speciosa*) and narrow-leaf milk weed (*Asclepias fascicularis)* were observed during the botanical survey. Milkweed plants provide habitat for the monarch butterfly to lay eggs, and for the larvae to grow, pupate, and reach their adult stage. Given the presence of milkweeds, it is possible that the monarch butterfly may breed within the project site.

TABLE 3
Potential for Federal and State Special-Status Species to Occur on the Project Site
March 2024

COMMON NAME	SCIENTIFIC NAME	STATUS	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
FISH							
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	No fish-bearing streams are present in the project site. The Lower Klamath marbled sculpin would thus not be present.
MAMMALS							
Gray wolf	*Canis lupus*	FE, SE	Gray wolves are habitat generalists; 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. 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 is located in an urbanized area with a high level of human disturbance. Gray wolves would thus not be present.

TABLE 3
Potential for Federal and State Special-Status Species to Occur on the Project Site
March 2024

COMMON NAME	SCIENTIFIC NAME	STATUS	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
North American Wolverine	*Gulo gulo luscus*	FPT	Wolverines are dependent on areas in high mountains, near the tree-line, where conditions are cold year-round and snow cover persists well into the month of May. Female wolverines use birthing dens that are excavated in snow. Persistent, stable snow greater than 1.5 meters deep appears to be a requirement for birthing dens. Birthing dens consist of tunnels that contain well-used runways and bed sites and may naturally incorporate shrubs, rocks, and downed logs as part of their structure. Birthing dens may occur on rocky sites, such as north-facing boulder talus or subalpine cirques. Wolverines are very sensitive to human activities and often abandon den sites in response to human disturbance.	No	No	No	The project is located in an urbanized area with a high level of human disturbance. North American wolverines would thus not be present.

Federal Status
FE = Federally Listed – Endangered
FT = Federally Listed – Threatened
FC = Federal Candidate Species
FPT = Federal Proposed Species - Threatened
FD = Federally Delisted
FSC = Federal Species of Concern

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

California Rare Plant Rank
List 1A = Presumed extirpated in California and either rare or extinct elsewhere
List 1B = Rare or Endangered in California and elsewhere
List 2A = Presumed extirpated in California, but more common elsewhere
List 2B = Rare or Endangered in California, but more common elsewhere
List 3 = Plants for which we need more information - Review list (generally not considered special-status, unless unusual circumstances warrant)
List 4 = Plants of limited distribution - Watch list (generally not considered special-status, unless unusual circumstances warrant)

Threat Ranks
0.1 = Seriously Threatened in California
0.2 = Fairly Threatened in California
0.3 = Not Very Threatened in California

TABLE 4

Potential to Occur: Birds of Conservation Concern Identified by the U.S. Fish and Wildlife Service

City of Yreka Wastewater Treatment Plant Improvements Project – July 2024

Common Name	Scientific Name	General Habitat Description	Nesting Habitat Present (Y/N)?	Species Present (Y/N/POT.)	Rationale/Comments
Bald eagle	*Haliaeetus leucocephalus*	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	The project site does not support old growth trees near open bodies of water. Although eBird records show that bald eagles have been sighted in the project vicinity on a few occasions, they are not expected to nest in the project site.
California gull	*Larus californicus*	California gulls primarily breed on sparsely vegetated islands and levees in inland lakes and rivers, and also in salt ponds in the San Francisco Bay Area. Breeding colonies range in elevation from sea level to 9,000 feet and are usually surrounded by water to prevent predators from reaching the nests. The gulls tend to avoid heavily forested areas. In the winter, they forage along the Pacific Coast, using mudflats, rocky shorelines, beaches, estuaries, and river deltas.	No	No	Although eBird records show that the California gull has been sighted on several occasions in the City of Yreka, there is no nesting habitat present in the project area. Therefore, they are not expected to nest within the project site.
Cassin's finch	*Carpodacus cassinii*	Habitats include conifers in high mountains as well as lower levels in winter. Cassin's finches breed mostly in montane forests of conifers, especially spruce and fir, also in pine and Douglas-fir in some areas and sometimes in pinon-juniper woods. They may be found at very high elevations, near the tree line in mountains. They spend winters in montane forests of conifers and sometimes in open woods of lower valleys. The breeding season is May 15 to July 15.	No	No	Although eBird records show that Cassin's finches have been sighted in the project vicinity, no suitable nesting habitat is present in the project site. Therefore, they are not expected to nest within the project site.
Evening grosbeak	*Coccothraustes vespertinus*	Evening grosbeaks breed and forage mostly in mixed-conifer and red fir habitats, and usually nest in dense, mature conifer forests dominated by firs. The evening grosbeak breeding season lasts from early June into late August, with a peak in July; however, they are highly unpredictable in distribution and abundance, even in the breeding season.	No	No	Because the project site does not contain dense, mature conifer forests, evening grosbeaks are not expected to nest in the project site.

TABLE 4

Potential to Occur: Birds of Conservation Concern Identified by the U.S. Fish and Wildlife Service

City of Yreka Wastewater Treatment Plant Improvements Project – July 2024

Common Name	Scientific Name	General Habitat Description	Nesting Habitat Present (Y/N)?	Species Present (Y/N/POT.)	Rationale/Comments
Chestnut-backed chickadee	*Poecile rufescens rufescens*	Chestnut-backed chickadees are found mainly in dense, wet coniferous forests along the Pacific Coast. They also occur in some deciduous forests, particularly willow and alder stands along streams, eucalyptus groves, open patches of madrone and shrubs, and sometimes along the edges of oak woodlands. They're also commonly seen in urban, suburban, and rural areas where extensive trees and shrubs are present. Nest sites can be holes in rotted trees, stumps, and posts soft enough for the chickadees to excavate themselves, or old woodpecker holes. These nests are commonly 1-12 feet off the ground.	No	No	According to eBird records, chestnut-backed chickadees have not been reported in the study area. There are no dense, wet coniferous forests, deciduous forests, or oak woodlands in the project site, and it is unlikely that the species would nest in the area.
Golden eagle	*Aquila chrysaetos*	Golden eagles may be found throughout all of California except the Central Valley, ranging from sea level to over 11,000 feet in elevation. They inhabit oak woodlands, coniferous forests, and deserts and require open terrain for hunting. Nesting habitat consists of large trees in open areas or cliff-walled canyons. Breeding occurs between late January and August. Eggs are usually laid between early February and mid-May, with the nestling period concluding about four months later.	No	No	eBird records indicate that golden eagles have been sighted numerous times in the City of Yreka. However, no suitable nesting sites are present in the project area. Therefore, there is no potential for golden eagles to nest in the project site.
Lesser yellowlegs	*Tringa flavipes*	Lesser yellowlegs breed in Alaska and northern Canada in open woodland clearings or burned-over areas, usually close to grassy wetlands. During migration, the species travels to the outer California coast and adjacent coastal lowlands, the Central Valley, Great Basin, and Salton Sea. The species forages along shallow lacustrine, wet meadow, and estuarine mudflat habitats.	No	No	According to eBird records, lesser yellowlegs have not been reported in the study area. The project site is located outside the known breeding range for this species. Therefore, there is no potential for the lesser yellowlegs to nest in the project site.
Oak titmouse	*Baeolophus inornatus*	The oak titmouse mostly lives in warm, open, dry oak or oak-pine woodlands. Many will use scrub oaks or other brush as long as woodlands are nearby. Nests are built in tree cavities and are made of grass, moss, hair, and feathers. Occasionally, oak titmice nest in stumps, fenceposts, pipes, eaves, or holes in riverbanks. They will also use nest boxes. The breeding season is March 15 to July 15.	No	No	Although eBird records show that oak titmice have been frequently sighted in the general project vicinity, no woodlands or other suitable nesting habitat are present in the project site. Therefore, they are not expected to nest within the project site.

TABLE 4

Potential to Occur: Birds of Conservation Concern Identified by the U.S. Fish and Wildlife Service

City of Yreka Wastewater Treatment Plant Improvements Project – July 2024

Common Name	Scientific Name	General Habitat Description	Nesting Habitat Present (Y/N)?	Species Present (Y/N/POT.)	Rationale/Comments
Olive-sided flycatcher	*Contopus cooperi*	Olive-sided flycatchers breed in montane and northern coniferous forests, at forest edges and around openings, such as meadows and ponds. The nest is an open cup of twigs, rootlets, and lichens, placed near the tip of a horizontal branch of a tree. The breeding season is May 20 to August 31.	No	No	Although eBird records indicate that olive-sided flycatchers are occasionally sighted in Yreka, the project site does not contain suitable nesting habitat. Therefore, they are not expected to nest in the project site.
Rufous hummingbird	*Selasphorus rufus*	Rufous hummingbirds typically breed in open or shrubby areas in mountain meadows up to 12,600 feet in elevation. They put their nests up to 30 feet high in coniferous or deciduous trees, hidden in drooping branches. Throughout migration, they pass through mountain meadows where nectar-rich, tubular flowers are blooming. The breeding season is April 15 to July 15.	No	No	Although eBird records show that rufus hummingbirds have been sighted occasionally in the City of Yreka, the project site is outside the known breeding range for this species. Therefore, they are not expected to nest in the project site.
Wrentit	*Chamaea fasciata*	Habitats for the wrentit include chaparral, brush, parks, and garden shrubs. Within its range, the species inhabits most kinds of dense low growth, such as chaparral, thickets of poison oak, and coastal sage scrub. Found in streamside thickets and in shrubby areas in suburbs and city parks; extends very locally to edge of desert. The breeding season is March 15 to August 10.	No	No	eBird records show that wrentits have frequently been observed in the project vicinity; however, the project site does not include suitable habitat for this species. Therefore, they are not expected to nest on the project site.

Sources:

U.S. Fish and Wildlife Service, Environmental Conservation Online System (ECOS)

The Cornell Lab of Ornithology, *All About Birds*. n.d.. https://www.allaboutbirds.org/guide/search/

Audubon and The Cornell Lab of Ornithology, eBird Species Maps. n.d. http://ebird.org/ebird/map/

California Natural Diversity Database (CNDDB), RareFind 5 and BIOS Viewer

APPENDIX A

Resumes

Donald Burk, Environmental Services Manager

DONALD M. BURK

Environmental Services Manager

Education

M.S. Botany
California State University, Chico

B.A. Chemistry and Biological Sciences
California State University, Chico

Professional Affiliations and Certifications

Society of Wetland Scientists
California Botanical Society
California Native Plant Society
Association of Environmental Professionals

Donald Burk has an in-depth background in a broad spectrum of environmental studies. His academic background includes graduate studies in environmental analysis methodology, biological sciences, and community planning. He has continued his professional development through completion of specialized courses in wetland delineation; wetland impacts and mitigations; vernal pool restoration and creation; noise assessments; Surface Mining and Reclamation Act regulations; erosion control practices; and hazardous materials evaluation and remediation. As environmental services manager with ENPLAN, Mr. Burk is instrumental in the preparation of environmental documents such as site assessment reports, environmental impact reports, biological studies, and noise evaluations. His responsibilities include project team management, key decision-making, coordination with applicable agencies, and final review of environmental documents. Having worked in the environmental consulting field since 1981, Mr. Burk has the skills and experience to manage studies to achieve reliable data and concise, effective documentation in a timely and cost-efficient manner.

While attending CSU, Chico, Mr. Burk was recognized as “Outstanding Organic Chemist of the Year,” received an award of merit from the American Botanical Society, and delivered the valedictory address for the School of Natural Sciences. His Master’s thesis was granted the first annual “Outstanding Thesis Award” by CSU, Chico.

Representative Experience

- *CEQA/NEPA Compliance.* Prepared environmental impact reports, environmental impact statements, and other environmental compliance documentation for a multitude of projects, including 516- and 1,244-acre industrial parks; public facilities projects including several sewage treatment plants, a 90-foot-high earthen dam and 15-acre reservoir, a 6-mile-long, 8-lane roadway, other new road corridors, and water supply projects; shopping centers and highway commercial developments; a 10,000-seat church; a 475-acre recreation ranch; ski areas; a softball park; four new schools; a 1-million cubic yard reservoir dredging project; numerous residential developments and many other projects.

- *Environmental Site Assessments.* Managed preparation of Phase I, II and III site investigations for a number of commercial and industrial facilities. Investigations have addressed wood-products manufacturing facilities, a major clothing manufacturing operation, dry cleaners, a medical clinic, ranches, a regional transmission transformer site, automotive shops and service stations, abandoned sewage treatment ponds, office buildings, shopping centers, and other uses.
- *Biological Studies.* Managed preparation of technical field studies, including wildlife and botanical studies for a 1,016-acre site in Sacramento County; fisheries, aquatic macroinvertebrate, and riparian vegetation studies for a 38-mile reach of the North Fork Feather River; botanical surveys for 175-mile and 265-mile underground telephone cable corridors; botanical surveys for over 2,400 acres on Mount Shasta proposed for ski area development; biological surveys for a 200-acre park site; spotted owl surveys; vernal pool fairy/tadpole shrimp and valley elderberry longhorn beetle assessments; and numerous other projects.
- *Wetland Delineations.* Managed preparation of wetland delineations and/or U.S. Army Corps of Engineers permit applications for a 1,016-acre site east of Sacramento, a 200-acre site in north Redding, a 580-acre site in the City of Weed, a 100-acre site near the Redding Municipal Airport, a transmission corridor project in east Redding, a 78-acre industrial parcel in the City of Benicia, and many other parcels throughout northern California.
- *Noise Studies.* Prepared noise studies for a variety of projects, including numerous traffic corridors; large industrial facilities such as a co-generation plant, food processing plant, and a regional scrap metal recycling facility; recreation facilities such as a new ski area and a community sports complex; many new residential developments; schools; and other facilities. Testified as an expert witness in a court case involving noise generated by electric- and diesel-powered water well pumps.
- *Reclamation Plans/Stream Restoration Projects.* Prepared mine reclamation plans and/or technical studies for projects including an aggregate pit adjacent to Cow Creek in Shasta County, a pumice quarry in Napa County, and underground gold mines in Shasta and Trinity Counties. Managed preparation of a stream restoration project for a reach of the Susan River, which involved hydraulic analysis, preparation of an earth-work plan, supervision of all on-site construction activities, preparation of a revegetation/erosion control plan and supervision of its implementation, and preparation of a monitoring program. Developed a plan, and obtained all agency approvals, for creation of 10 acres of riparian forest habitat along the Sacramento River to mitigate losses on a nearby parcel.

Publications

Burk, Donald et al. (29 contributing authors). Technical Editors Gary Nakamura, UC Cooperative Extension Service and Julie Kierstead Nelson, USDA Forest Service, Shasta-Trinity National Forest. 2001. *Illustrated Field Guide to Selected Rare Plants of Northern California.* University of California, Agriculture and Natural Resources. Publication 3395.

Luper, J. and D. Burk. 2014. Noteworthy collections: *Froelichia gracilis* (Amaranthaceae). Madrono 61(4):413-413.

APPENDIX B

Representative Photographs

Access road to control building, with montane riparian habitat to left of road. View to north.

Typical view of disposal fields. View to south from northern entrance.

Several showy milkweeds in disposal fields.

Lift Station 1. View to north from Montague Road.

APPENDIX C

U.S. Fish and Wildlife Service List of Threatened and Endangered Species

National Marine Fisheries Service Species List

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: 07/03/2024 19:37:23 UTC
Project Code: 2024-0111750
Project Name: Yreka Wastewater Treatment Plant Improvements

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 IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC 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: https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.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 Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service (fws.gov).

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/library/collections/threats-birds.

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/partner/council-conservation-migratory-birds.

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: 2024-0111750
Project Name: Yreka Wastewater Treatment Plant Improvements
Project Type: Wastewater Facility - Maintenance / Modification
Project Description: Improvements to the City of Yreka's wastewater treatment plant and lift stations.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.743336150000005,-122.6309470984638,14z

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	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

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

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.	Endangered

NAME STATUS

Species profile: https://ecos.fws.gov/ecp/species/8246

Vernal Pool Fairy Shrimp *Branchinecta lynchi* Threatened

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

Vernal Pool Tadpole Shrimp *Lepidurus packardi* Endangered

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

FLOWERING PLANTS

NAME STATUS

Yreka Phlox *Phlox hirsuta* Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/8243

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: ENPLAN
Name: Carla Thompson
Address: 3179 Bechelli Ln
City: Redding
State: CA
Zip: 96002
Email cthompson@enplan.com
Phone: 5302210440

National Marine Fisheries Service

July 2024

Quad Name **Yreka**
Quad Number **41122-F6**

ESA Anadromous Fish

SONCC Coho ESU (T) - **X**
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

Quad Name **Badger Mountain**
Quad Number **41122-G6**

ESA Anadromous Fish

SONCC Coho ESU (T) - **X**
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

Quad Name **Hawkinsville**
Quad Number **41122-G5**

ESA Anadromous Fish

SONCC Coho ESU (T) - **X**
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

Quad Name **Montague**
Quad Number **41122-F5**

ESA Anadromous Fish

SONCC Coho ESU (T) - **X**
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

APPENDIX D

List of Vascular Plants Observed

LIST OF VASCULAR PLANT SPECIES OBSERVED

City of Yreka Wastewater Treatment Plant Improvements

June 9, 2023

Amaranthaceae	**Amaranth Family**
Amaranthus sp.	Pigweed
Anacardiaceae	**Sumac Family**
Rhus aromatica	Skunkbrush
Apiaceae	**Carrot Family**
Anthriscus caucalis	Bur-chervil
Conium maculatum	Poison hemlock
Apocynaceae	**Dogbane Family**
Asclepias fascicularis	Narrow-leaf milkweed
Asclepias speciosa	Showy milkweed
Asteraceae	**Sunflower Family**
Achillea millefolium	Common yarrow
Agoseris grandiflora	Giant mountain dandelion
Ambrosia psilostachya	Western ragweed
Centaurea solstitialis	Yellow star thistle
Cichorium intybus	Chicory
Ericameria nauseosa	Rubber rabbitbrush
Erigeron sp.	Fleabane daisy
Euthamia occidentalis	Western goldenrod
Grindelia nana	Idaho gumweed
Lactuca sp.	Lettuce
Lagophylla ramosissima	Common hareleaf
Madia elegans	Common madia
Matricaria discoidea	Pineapple weed
Onopordum acanthium var. *acanthium*	Scottish thistle
Taraxacum officinale	Common dandelion
Tragopogon dubius	Yellow salsify
Boraginaceae	**Borage Family**
Amsinckia retrorsa	Rigid fiddleneck
Brassicaceae	**Mustard Family**
Alyssum desertorum	Alyssum
Capsella bursa-pastoris	Shepherd's purse
Hirschfeldia incana	Shortpod mustard
Isatis tinctoria	Dyer's-woad
Lepidium chalepense	Lens-podded hoary cress
Lepidium perfoliatum	Round-leaved peppergrass
Sisymbrium altissimum	Tumble-mustard
Chenopodiaceae	**Goosefoot Family**
Chenopodium fremontii	Fremont's goosefoot
Chenopodium vulvaria	Stinking goosefoot
Dysphania botrys	Jerusalem oak
Convolvulaceae	**Morning Glory Family**
Calystegia occidentalis	Western morning-glory
Cornaceae	**Dogwood Family**
Cornus glabrata	Brown dogwood

LIST OF VASCULAR PLANT SPECIES OBSERVED

City of Yreka Wastewater Treatment Plant Improvements

Cupressaceae	**Cypress Family**
Calocedrus decurrens	Incense-cedar
Juniperus occidentalis	Western juniper
Cyperaceae	**Sedge Family**
Eleocharis sp.	Spikerush
Schoenoplectus acutus	Common tule
Dipsacaceae	**Teasel Family**
Dipsacus fullonum	Wild teasel
Euphorbiaceae	**Spurge Family**
Euphorbia maculata	Spotted surge
Fabaceae	**Legume Family**
Acmispon americanus var. *americanus*	Spanish lotus
Medicago lupulina	Black medick
Medicago sativa	Alfalfa
Melilotus officinalis	Yellow sweetclover
Trifolium hirtum	Rose clover
Geraniaceae	**Geranium Family**
Erodium cicutarium	Red-stemmed filaree
Grossulariaceae	**Gooseberry Family**
Ribes aureum var. *aureum*	Golden currant
Ribes velutinum	Desert gooseberry
Juglandaceae	**Walnut Family**
Juglans hindsii	Northern California black walnut
Juncaceae	**Rush Family**
Juncus balticus subsp. *ater*	Baltic rush
Malvaceae	**Mallow Family**
Malva sp.	Mallow
Papaveraceae	**Poppy Family**
Eschscholzia californica	California poppy
Pinaceae	**Pine Family**
Pinus sp.	Pine (horticultual)
Pinus ponderosa	Ponderosa pine
Plantaginaceae	**Plantain Family**
Plantago lanceolata	English plantain

LIST OF VASCULAR PLANT SPECIES OBSERVED

City of Yreka Wastewater Treatment Plant Improvements

Poaceae	**Grass Family**
Bromus diandrus	Ripgut grass
Bromus racemosus	Smooth brome
Bromus sitchensis var. *carinatus*	California brome
Bromus tectorum	Downy brome
Distichlis spicata	Saltgrass
Elymus caput-medusae	Medusahead
Elymus multisetus	Big squirreltail
Elymus repens	Quack grass
Eragrostis minor	Low lovegrass
Festuca arundinacea	Tall fescue
Festuca myuros	Foxtail fescue
Hordeum murinum	Foxtail barley
Panicum capillare	Witchgrass
Phalaris arundinacea	Reed canary grass
Poa bulbosa	Bulbous bluegrass
Secale cereale	Rye
Polemoniaceae	**Phlox Family**
Collomia grandiflora	Large-flowered collomia
Polygonaceae	**Buckwheat Family**
Eriogonum luteolum var. *luteolum*	Golden buckwheat
Eriogonum nudum	Naked buckwheat
Polygonum aviculare	Common knotweed
Rumex crispus	Curly dock
Ranunculaceae	**Buttercup Family**
Clematis ligusticifolia	Virgin's bower
Rhamnaceae	**Buckthorn Family**
Frangula purshiana	Cascara
Rosaceae	**Rose Family**
Cercocarpus betuloides var. *betuloides*	Birch-leaved mountain-mahogany
Prunus sp.	Prunus
Prunus cerasifera	Cherry plum
Prunus virginiana var. *demissa*	Western choke-cherry
Rosa canina	Dog rose
Rosa rubiginosa	Sweetbriar
Rubus armeniacus	Himalayan blackberry
Rubiaceae	**Madder Family**
Galium parisiense	Wall bedstraw
Salicaceae	**Willow Family**
Salix exigua var. *hindsiana*	Sandbar willow
Salix laevigata	Red willow
Sapindaceae	**Soapberry Family**
Acer negundo	Box elder
Scrophulariaceae	**Snapdragon Family**
Verbascum thapsus	Woolly mullein
Themidaceae	**Brodiaea Family**
Brodiaea elegans subsp. *elegans*	Elegant brodiaea

LIST OF VASCULAR PLANT SPECIES OBSERVED

City of Yreka Wastewater Treatment Plant Improvements

Typhaceae	**Cattail Family**
Typha sp.	Cattail
Urticaceae	**Nettle Family**
Urtica dioica	Stinging nettle
Urtica dioica subsp. *holosericea*	Hoary creek nettle
Valerianaceae	**Valerian Family**
Valerianella locusta	Corn salad
Verbenaceae	**Vervain Family**
Verbena lasiostachys	Western verbena
Zygophyllaceae	**Caltrop Family**
Tribulus terrestris	Puncture vine