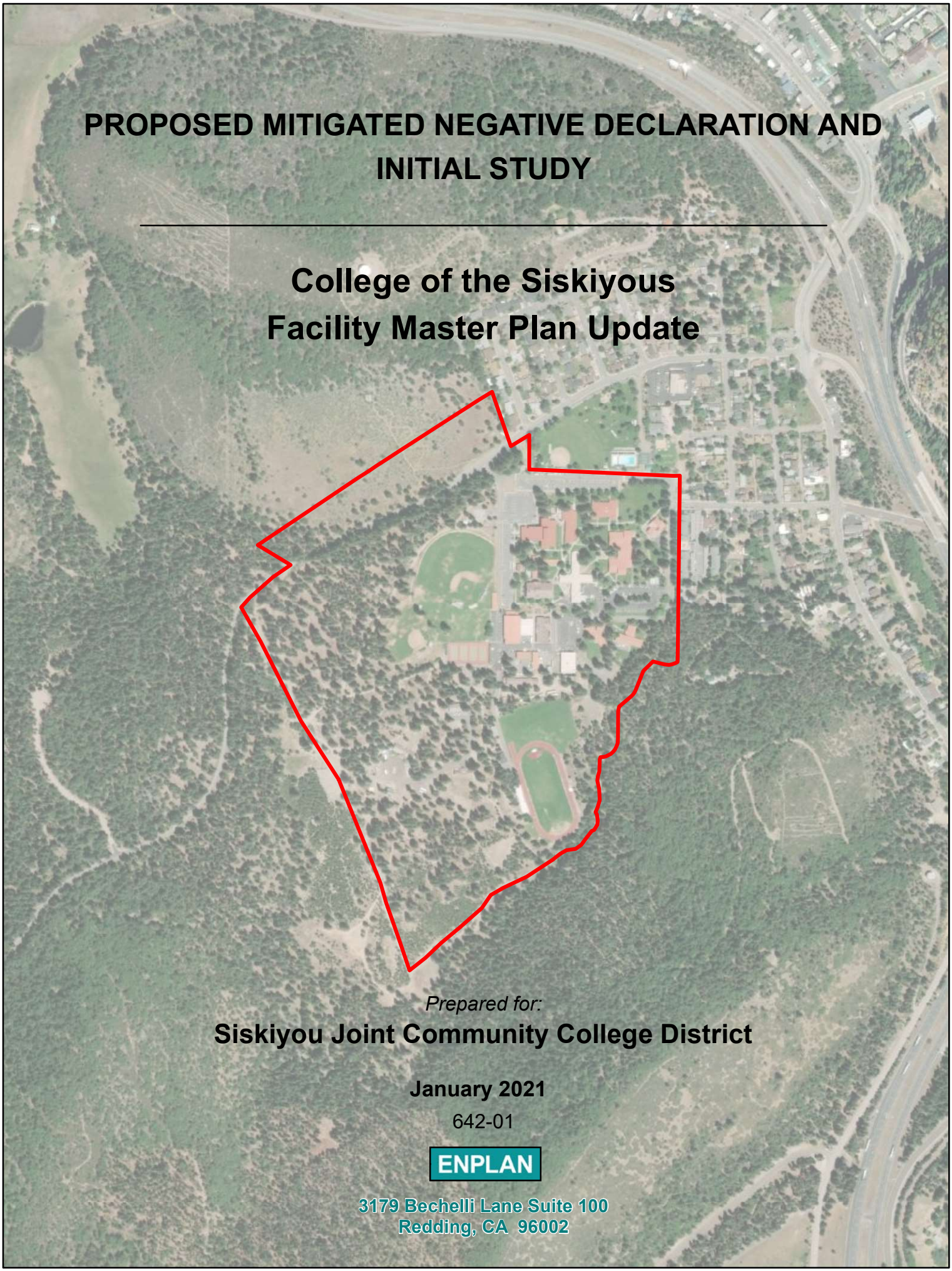
PROPOSED MITIGATED NEGATIVE DECLARATION AND INITIAL STUDY

College of the Siskiyous
Facility Master Plan Update



Prepared for:

Siskiyou Joint Community College District

January 2021

642-01

ENPLAN

3179 Bechelli Lane Suite 100
Redding, CA 96002

PROPOSED MITIGATED NEGATIVE DECLARATION

LEAD AGENCY:	Siskiyou Joint Community College District
PROJECT PROPONENT:	Siskiyou Joint Community College District
PROJECT NAME:	**College of the Siskiyous Facility Master Plan Update**
PROJECT SUMMARY:	The College of the Siskiyous (COS) Facility Master Plan update identifies improvements needed to accommodate current and future programs. The Master Plan identifies renovations, improvements, and new construction on the Weed Campus property. Improvements include demolishing obsolete structures; constructing additional student housing, tactical and emergency services training facilities, athletic program facilities, and academic buildings; renovating/expanding existing buildings; and constructing a solar field. The purpose of the project is to improve facilities, increase efficiency, enhance sustainability, resolve overbuilt status, and update technology.
LOCATION:	As shown in **Figure 1**, the proposed project is located within the City of Weed on the west side of Interstate 5 (I-5) and north of Sullivan Avenue in Section 11, Township 41 North, Range 5 West of the U.S. Geological Survey (USGS) Weed quadrangle. Improvements to the campus would be made on the south side of College Avenue, and the Solar Field would be constructed on the north side of College Avenue. Latitude: 41° 24’ 46.71” N; Longitude: 122° 23’ 21.032” W.

FINDINGS / DETERMINATION

As documented in the Initial Study, project implementation would result in conversion of timberland to non-forest use, could potentially affect wetlands or other sensitive habitats, disturb nesting birds (if present), adversely affect historical, cultural, and tribal cultural resources (if present), contribute to the need for additional wastewater treatment capacity, result in the introduction and spread of noxious weeds, temporarily increase air emissions, and temporarily increase noise and vibration levels.

Design features incorporated into the project would avoid or reduce certain potential environmental impacts, as would compliance with existing regulations and permit conditions. Remaining impacts can be reduced to levels that are less than significant through implementation of the mitigation measures presented in Section 1.9 of the Initial Study. Because the Siskiyou Joint Community College District 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 Governing Board of Trustees of the Siskiyou Joint Community College District on _____, 2021.

INITIAL STUDY

COLLEGE OF THE SISKIYOUS

FACILITY MASTER PLAN UPDATE

SISKIYOU JOINT COMMUNITY COLLEGE DISTRICT

LEAD AGENCY:

Siskiyou Joint Community College District
800 College Avenue
Weed, CA 96094
530.938.5555

PREPARED BY:

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

January 2021

Table of Contents

			Page
SECTION 1.0	**INTRODUCTION**		1
	1.1	PROJECT SUMMARY	1
	1.2	PURPOSE OF STUDY	1
	1.3	EVALUATION TERMINOLOGY	1
	1.4	ORGANIZATION OF THE INITIAL STUDY	2
	1.5	PROJECT LOCATION	2
	1.6	ENVIRONMENTAL SETTING	4
	1.7	REGULATORY REQUIREMENTS	4
	1.8	TRIBAL CULTURAL RESOURCES CONSULTATION	5
	1.9	ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED	6
	1.10	SUMMARY OF MITIGATION MEASURES	7
SECTION 2.0	**CEQA DETERMINATION**		10
SECTION 3.0	**PROJECT DESCRIPTION**		**11**
	3.1	PROJECT BACKGROUND AND OBJECTIVES	11
	3.2	PROJECT COMPONENTS/PHYSICAL IMPROVEMENTS	13
SECTION 4.0	**ENVIRONMENTAL ANALYSIS (CHECKLIST)**		17
	4.1	AESTHETICS	17
	4.2	AGRICULTURE AND FOREST RESOURCES	22
	4.3	AIR QUALITY	27
	4.4	BIOLOGICAL RESOURCES	37
	4.5	CULTURAL RESOURCES	48
	4.6	ENERGY	53
	4.7	GEOLOGY AND SOILS	58
	4.8	GREENHOUSE GAS EMISSIONS	63
	4.9	HAZARDS AND HAZARDOUS MATERIALS	76
	4.10	HYDROLOGY AND WATER QUALITY	82
	4.11	LAND USE AND PLANNING	90
	4.12	MINERAL RESOURCES	91
	4.13	NOISE	93
	4.14	POPULATION AND HOUSING	105
	4.15	PUBLIC SERVICES	107
	4.16	RECREATION	110
	4.17	TRANSPORTATION	112
	4.18	TRIBAL CULTURAL RESOURCES	116
	4.19	UTILITIES AND SERVICE SYSTEMS	118
	4.20	WILDFIRE	126
	4.21	MANDATORY FINDINGS OF SIGNIFICANCE	130
SECTION 5.0	**LIST OF PREPARERS**		131
SECTION 6.0	**ABBREVIATIONS AND ACRONYMNS**		132

FIGURES		
Figure 1	Project Location and Vicinity	3
Figure 2	Existing Buildings	12
Figure 3	Proposed Demolition and Relocation	14
Figure 4	Proposed Facilities	15
Figure 4.2-1	Non-Industrial Timber Management Plan Boundary	26
Figure 4.4-1	Potentially Regulated Waters in the Project Study Area	44
Figure 4.13-1	Noise Levels of Common Activities	96

TABLES		
Table 4.3-1	Federal Criteria Air Pollutants	28
Table 4.3-2	Federal and State Ambient Air Quality Standards	30
Table 4.3-3	Projected Construction Emissions	33
Table 4.3-4	Projected Operational Emissions	34
Table 4.8-1	Greenhouse Gases	66
Table 4.8-2	Greenhouse Gases: Global Warming Potential and Atmospheric Lifetime	70
Table 4.8-3	Estimated Annual Greenhouse Gas Emissions	72
Table 4.13-1	City of Weed Maximum Allowable Noise Levels	95
Table 4.13-2	Examples of Construction Equipment Noise Emission Levels	97
Table 4.13-3	Cumulative Noise: Identical Sources	98
Table 4.13-4	Cumulative Noise: Different Sources	98
Table 4.13-5	Threshold for Exposure to Noise to Prevent Hearing Damage	99
Table 4.13-6	Structural Damage Thresholds from Ground-Borne Vibration	102
Table 4.13-7	Human Response to Ground-Borne Vibration	102
Table 4.13-8	Examples of Construction Equipment Ground-Borne Vibration	102

Appendices

Appendix A: CalEEMod Air Quality/Greenhouse Gas Emissions Output Files

Appendix B: Biological Resources Documentation

- ENPLAN Summary Report: *Potential for Special-Status Species to Occur on the Project Site*
- U.S. Fish and Wildlife Service (USFWS) List of Threatened and Endangered Species
- California Natural Diversity Database (CNDDB) Query Summary
- California Native Plant Society (CNPS) Query Summary
- National Marine Fisheries Service List of Threatened and Endangered Species, Critical Habitats, and Essential Fish Habitat
- List of Vascular Plants Observed: April 28, August 15, and August 22, 2020

SECTION 1.0 INTRODUCTION

1.1 PROJECT SUMMARY

Project Title:	**College of the Siskiyous Facility Master Plan Update**
Lead Agency and Project Proponent:	**Siskiyou Joint Community College District** 800 College Avenue Weed, CA 96094
Contact Person and Phone Number:	**Veronica Rivera, Director of Facilities and Maintenance** 530.938.5345
Environmental Consultant:	**ENPLAN** 3179 Bechelli Lane, Suite 100 Redding, CA 96002

College of the Siskiyous (COS) is proposing to update their 2017 Facility Master Plan to identify renovations, improvements, and new construction on the Weed Campus property. Proposed improvements are described in Section 3.0 (Project Description).

1.2 PURPOSE OF STUDY

The Siskiyou Joint Community College District (District), as Lead Agency, has prepared this Initial Study to provide the general public and interested public agencies with information about the potential environmental impacts of the proposed COS Facility Master Plan Update (project). The project addresses proposed renovations, improvements, and new construction on the Weed Campus property. Details about the proposed project are included in Section 3.0 (Project Description) of this Initial Study.

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

1.3 EVALUATION TERMINOLOGY

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

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

- **Potentially Significant Impact**. The proposed project will have significant impacts on the environment, and additional analysis is required to determine if it is feasible to adopt mitigation measures or project alternatives to reduce these impacts to less than significant levels.

1.4 ORGANIZATION OF THE INITIAL STUDY

This document is organized into the following sections:

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

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

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

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

Section 5.0: **List of Preparers**

Section 6.0: **Abbreviations and Acronyms**

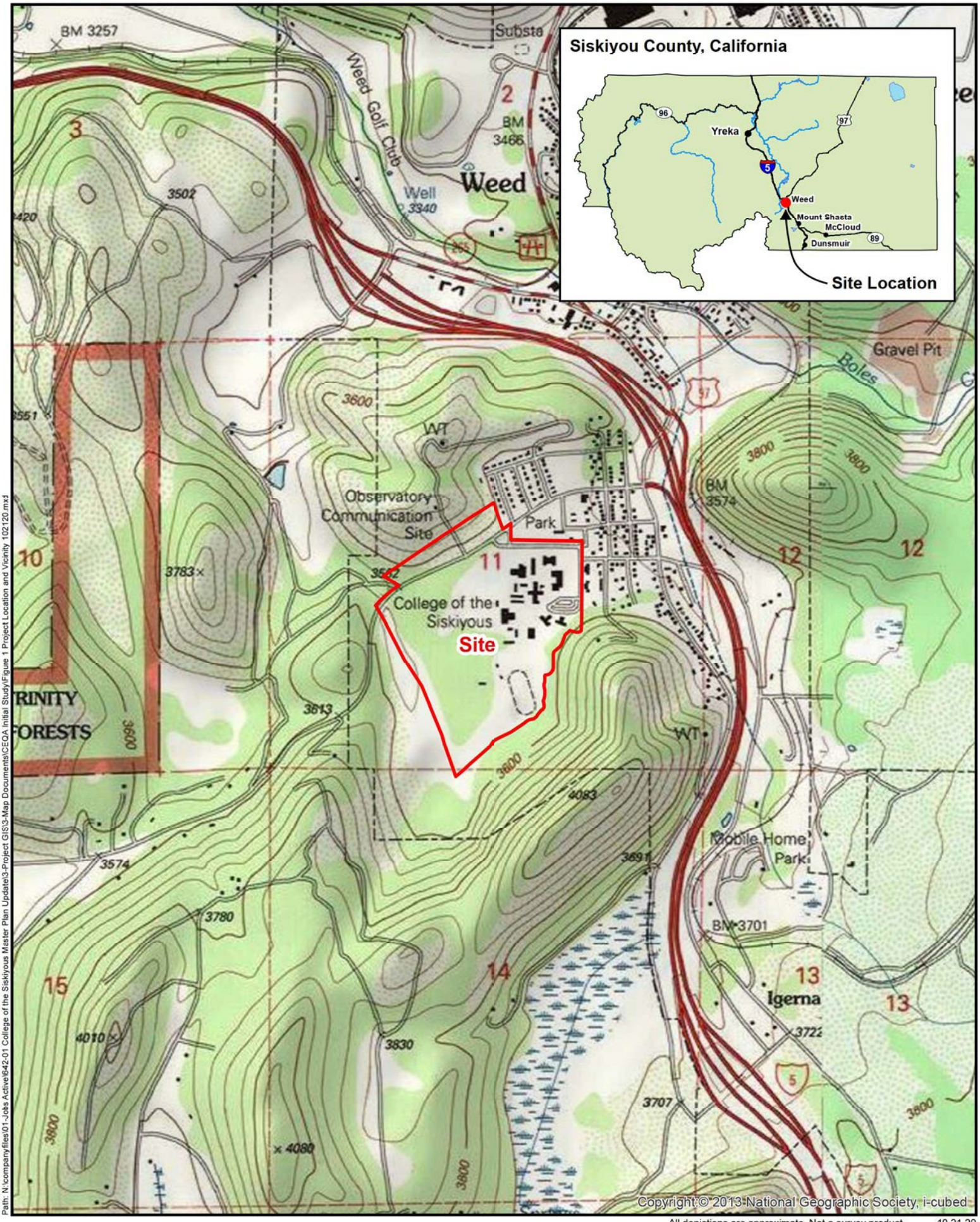
Appendices: Contains information to supplement Section 4.0.

1.5 PROJECT LOCATION

As shown in **Figure 1**, the proposed project is located within the City of Weed on the west side of Interstate 5 (I-5) and generally south of College Avenue in Section 11, Township 41 North, Range 5 West of the U.S. Geological Survey (USGS) Weed quadrangle. Improvements to the campus would be made on the south side of College Avenue, while the solar field would be constructed on the north side of College Avenue. Latitude: 41° 24’ 46.71” N; Longitude: 122° 23’ 21.032” W.

Assessor’s Parcel Numbers: 060-401-030 and portions of 060-401-060, 060-401-010, and 060-401-020.

For purposes of this evaluation, “study area” encompasses ±113 acres as shown in **Figure 1.**



All depictions are approximate. Not a survey product. 10.21.20

Path: N:\company\files\01-Jobs Active\642-01 College of the Siskiyous Master Plan Update\3-Project GIS\3-Map Documents\CEQA Initial Study\Figure 1 Project Location and Vicinity 102120.mxd

Feet
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Figure 1
Project Location and Vicinity

ENPLAN

1.6 ENVIRONMENTAL SETTING

General Plan Designation:	Public Facilities
Zoning:	Public/Semi-Public (PSP)
Surrounding Land Uses:	Properties east and northeast of the project site are primarily developed with single-family and multi-family residences. Areas immediately west, northwest, and south of the campus are undeveloped. A community park and public swimming pool are located immediately north of the campus. A brewery/restaurant is located east of the park on College Avenue. Land uses along College Avenue are primarily residential.
Topography:	The project site is located at the southern end of the Shasta Valley at an elevation of about 3,600 feet. The College is in a transition zone between the relatively level valley floor and adjacent mountainous terrain. The study area is relatively level, although the proposed solar field is on a moderate slope with a south-facing aspect.
Soils:	The geology of the area is dominated by volcanic lava rock. The porous soil readily drains surface water. The volcanic rock/sand also provides a strong base that shifts little with the addition of surface movement and load. According to the U.S. Department of Agriculture, Natural Resources Conservation Service, the following soil units have been mapped within the project site: Deetz gravelly loamy sand, 5 to 15 percent slopes; Neer-Ponto stony sandy loams, 15 to 50 percent slopes complex; Neer-Ponto stony sandy loams, 15 to 50 percent slopes; Ponto sandy loam, 5 to 15 percent slopes; and Ponto-Neer complex, 2 to 15 percent slopes.
Natural Communities/ Wildlife Habitats:	Outside of the campus core, the study area is comprised primarily of ponderosa pine forest. This community consists almost exclusively of ponderosa pines, with only a small component of other conifers and broadleaf trees. The understory is very open. The community has been managed for human use and has been used for various educational activities including controlled burn exercises. A disc golf course and outdoor exercise area are located within the community. Water features in the project site are limited to drainage ditches and a single spring/wetland complex.
Climate:	The study area is characterized as Mediterranean, with cool, moist winters and warm, dry summers. Annual precipitation averages ±23.66 inches, as measured near the Weed airport; the average daily maximum July temperature is 85 degrees Fahrenheit (°F), and the average daily minimum January temperature is 24 °F (U.S. Climate Data, 2020 https://www.usclimatedata.com/climate/weed/california/united-states/usca1218

1.7 REGULATORY REQUIREMENTS

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

Siskiyou Joint Community College District:

- Adoption of a Mitigated Negative Declaration for the project pursuant to the California Environmental Quality Act (CEQA).

- Adoption of a Mitigation Monitoring and Reporting Program for the project that incorporates the mitigation measures identified in this Initial Study.

State of California Department of Forestry and Fire Protection:

- Approval of a Timber Harvesting Plan (THP), issuance of a Timberland Conversion Permit (TCP), and possible amendment to the Non-Industrial Timber Management Plan (NTMP) (#2-05NTMP-007).

California Department of General Services, Division of the State Architect

Pursuant to the California Education Code § 17280-17317 and §80030-81149 (The Field Act), the Division of the State Architect (DSA) has jurisdiction over the design, construction, alteration, and/or addition to any public school building. The DSA would review construction plans for improvements proposed under the Facility Master Plan to ensure compliance with applicable sections of the California Building Standards Code (CBSC), the Field Act, and other applicable regulations. The DSA would issue building permits as necessary prior to commencement of construction.

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

- Projects that involve earth disturbance over one acre in size are required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) permit for *Discharges of Storm Water Runoff Associated with Construction Activity* (currently Order No. 2009-009-DWQ) by submitting a Notice of Intent to the SWRCB. The permitting process requires the development and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) to reduce pollutants and any additional controls necessary to meet water quality standards.

- Section 401 Water Quality Certification (or waiver) and Report of Waste Discharge (if work would result in the discharge of dredged or fill material into wetlands or other waters of the U.S. and State).

U.S. Army Corps of Engineers:

- Section 404 Permit under the Federal Clean Water Act (if work would result in the discharge of dredged or fill material into wetlands or other waters of the U.S.).

California Department Fish and Wildlife:

- Issuance of Section 1600 Lake or Streambed Alteration Agreement (if work 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).

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

College of the Siskiyous (COS) has received one written request from the Karuk Tribe to be notified of proposed projects under the jurisdiction of COS as of December 1, 2020. On

December 23, 2020, written notification was sent by COS to the Karuk Tribe, along with a project description and maps depicting the proposed improvements.

PRC §21080.3.1(b) requires that the consultation commence prior to the release of the Mitigated Negative Declaration (MND). By providing written notification to the Tribe, COS commenced the consultation process in accordance with PRC §21080.3.1(b). PRC §21080.3.2(b) states that the consultation shall be considered concluded when either of the following occurs:

1. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource.

2. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

COS will continue the consultation process with the Karuk Tribe as necessary through to adoption of the MND.

In addition to the AB 52 consultation, as part of the cultural resources study for the project, ENPLAN obtained a list of local Native American contacts from the Native American Heritage Commission. Letters soliciting input were sent to all of the contacts; follow-up telephone calls or emails were also attempted. No responses were received.

In addition, an Archaeological Survey Report was prepared for the Timber Harvesting Plan by Dustin Lindler, Registered Professional Forester. Mr. Lindler's study also included consultation with Native American tribes on the California Department of Forestry (CDF) contact list, including the Karuk Tribe. Written notification was sent to all of the tribes on the CDF contact list on September 10, 2020, and no responses were received.

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

1.10 SUMMARY OF MITIGATION MEASURES

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

AIR QUALITY

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

a. All material excavated, stockpiled, or graded shall be covered or sufficiently watered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of ambient air quality standards. Watering shall occur at least twice daily with complete site coverage, preferably in the mid-morning and after work is completed each day.

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

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

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

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

f. All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least two feet of free board in accordance with the requirements of Section 23114 of the California Vehicle Code. This provision is enforced by local law enforcement agencies.

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

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

BIOLOGICAL

MM 4.4.1: Prior to implementation of individual projects addressed in the Facilities Master Plan that would occur within 25 feet of the water features shown in **Figure 4.4.1** or similar features, subsequent review shall be undertaken by a qualified wetland specialist or biologist to determine if the proposed individual project may affect regulated waters. If the individual project may affect regulated waters, the College of the Siskiyous shall obtain all necessary permits and comply with the permit conditions, and shall offset the permanent loss of waters at a minimum 1:1 ratio, or as otherwise required in the permits.

MM 4.4.2: The potential for introduction and spread of noxious weeds shall be avoided/minimized by:

- Using only certified weed-free erosion control materials, mulch, and seed.
- Limiting any import or export of fill material to material that is known to be weed free.
- Requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering the individual project site and immediately upon termination of its use at the individual project site.

MM 4.4.3: In order to avoid impacts to nesting birds protected under the federal Migratory Bird Treaty Act of 1918 or California Fish and Game Code §3503, including their nests and eggs, the following measures shall be implemented:

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

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

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

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

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

CULTURAL

MM 4.5.1 Prior to modification or demolition of any building or structure that is 50 years of age or greater, evaluation by a qualified architectural historian shall be completed in accordance with the significance criteria set forth in the National Historic Preservation Act and the California Register for Historical Resources. If the architectural historian determines that the subject building(s)/structure(s) is/are potentially eligible for listing in the National Register of Historic Places or the California Register of Historical Resources, appropriate mitigation measures recommended by the architectural historian shall be implemented.

MM 4.5.2 In the event of any inadvertent discovery of cultural resources (i.e., burnt animal bone, midden soils, projectile points or other humanly-modified lithics, historic artifacts, etc.), all work within 50 feet of the find shall be halted until a professional archaeologist can evaluate the significance of the find in accordance with PRC §21083.2(g) and §21084.1, and CEQA Guidelines §15064.5(a). If any find is determined to be significant by the archaeologist, the College of the Siskiyous 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 College prior to resuming construction.

MM 4.5.3 In the event that human remains are encountered during construction activities, the College of the Siskiyous shall comply with §15064.5 (e) (1) of the CEQA Guidelines and PRC §7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the County coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the NAHC to identify the most likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed in §15064.5 (e) has been completed.

NOISE

MM 4.13.1 Construction activities shall be limited to between the hours of 7:00 a.m. and 7:00 p.m.

Exceptions to these limitations may be approved by the Superintendent/President to prevent disruption of classroom activities and/or campus events, and for activities that require interruption of utility services to allow work during low demand periods, or to alleviate traffic congestion and safety hazards.

MM 4.13.2 Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.

MM 4.13.3 Prior to submittal of development plans to the Division of the State Architect, College of the Siskiyous shall ensure that outdoor noise-generating stationary equipment (e.g., emergency generators, heating and air conditioning units, exhaust fans, etc.) would not result in noise levels exceeding 55 dBA Ldn/CNEL at the nearest residences and 45 dBA Ldn/CNEL in any habitable room in the residences. Noise attenuation measures (e.g., installing shielding/noise barriers, installing generators inside enclosures, etc.) shall be implemented as necessary to ensure compliance with these noise standards.

TRIBAL CULTURAL RESOURCES

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

UTILITIES AND SERVICE SYSTEMS

MM 4.19.1 Prior to submittal of construction plans to the Department of the State Architect for any new development under the Facility Master Plan, College of the Siskiyous shall verify with the City of Weed that it has adequate capacity in its wastewater collection and treatment system to accommodate flows from the proposed use.

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 <u>MITIGATED NEGATIVE DECLARATION</u> 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.

Stephen Schoonmaker, Ed.D.
Superintendent/President
Siskiyou Joint Community College District

1/4/2021
Date

SECTION 3.0 PROJECT DESCRIPTION

3.1 PROJECT BACKGROUND AND OBJECTIVES

College of the Siskiyous (COS), established in 1957, presently has two campuses: the primary campus is in the City of Weed and a smaller campus is in the City of Yreka. The ±245-acre Weed campus is comprised of several distinct zones (i.e., campus core, athletics, mixed-use, forest, and observatory). Most of the campus buildings are between 45 and 60 years old and near or beyond their useful lives. Locations of existing buildings are shown in **Figure 2**. Although regular maintenance has occurred, the buildings show the effects of age, heavy use, and harsh climatic conditions.

Facility Master Plan Update

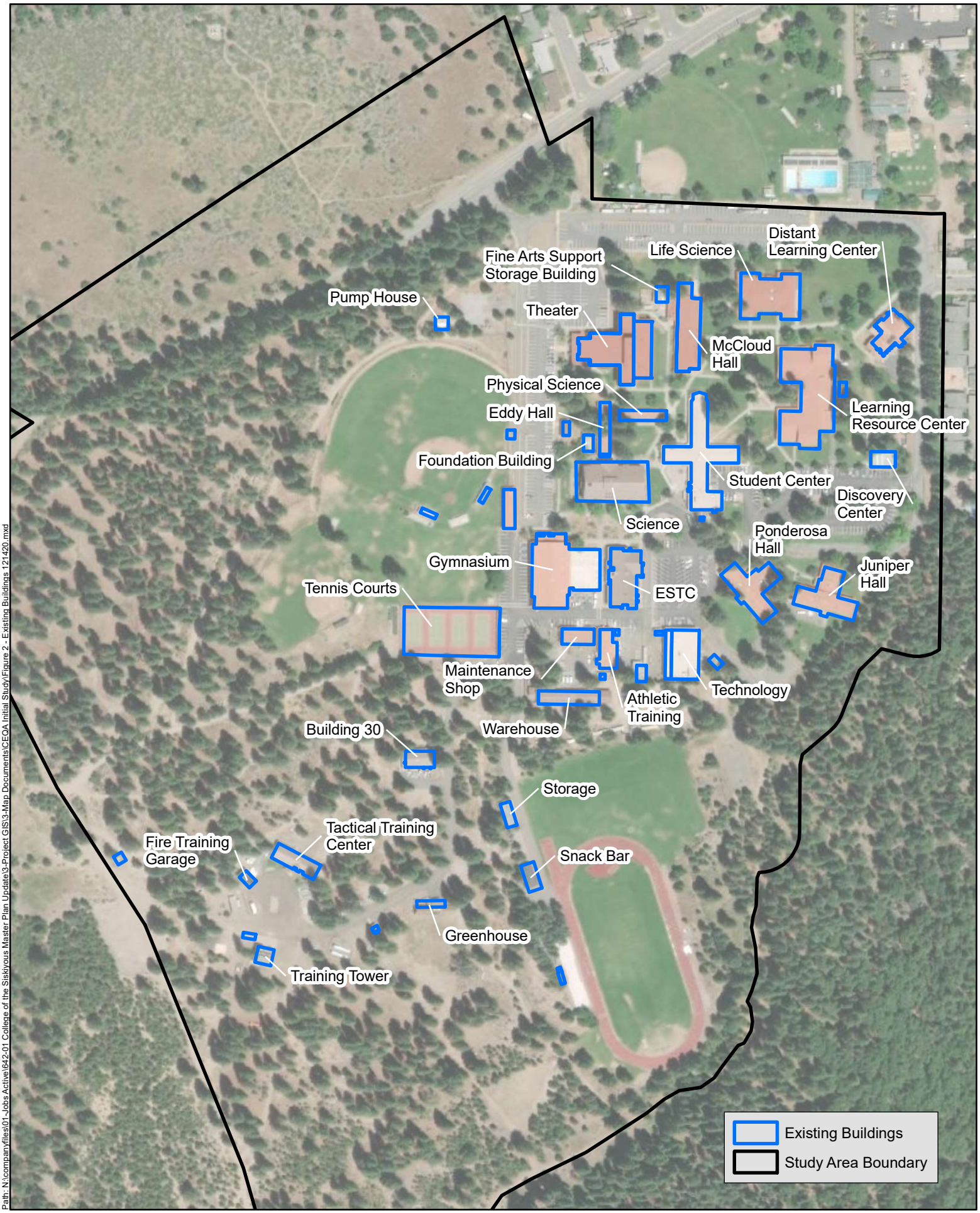
The proposed COS Facility Master Plan update addresses physical planning issues and is intended to guide development to achieve the academic and program goals of both the Weed and Yreka campuses through approximately year 2030. The Plan identifies improvements needed to accommodate current programs, as well as foreseeable future programs, and concludes with a list of proposed renovations and new construction on the Weed Campus property so as funding becomes available, projects can be prioritized, and where appropriate, implemented. According to the California Community College Chancellors Office, the campus contains more assignable square footage (ASF) than enrollment supports, and any additional ASF must be offset with a corresponding reduction elsewhere. The purpose of the project is to improve facilities, increase efficiency, enhance sustainability, resolve overbuilt status, and continue to update technology college-wide.

Timber Harvesting and Timberland Conversion

In November 2005, the California Department of Forestry and Fire Protection (CAL FIRE) approved a Non-Industrial Timber Management Plan (NTMP) (#2-05NTMP-007) for ±210 acres of undeveloped land owned by Siskiyou Joint Community College District (see discussion in Section 4.2 (Agriculture and Forest Resources).

In order to accommodate the proposed improvements, COS is applying for a Timber Harvesting Plan (THP) and Timberland Conversion Permit (TCP) for the ±113-acre project site. Approximately 63 acres of the ±113-acre project site are included in the NTMP boundaries, and operations under the NTMP have been suspended pending completion of pertinent improvements under the Facility Master Plan. It is likely that an amendment to the NTMP will be required prior to future THP operations, the nature of which is speculative at this time.

The needed permit applications are being prepared by a Registered Professional Forester (RPF) in accordance with the Z'Berg-Nejedly Forest Practice Act (Public Resources Code [PRC] Section 4511, *et seq.*) and Forest Practice Rules (California Code of Regulations, Title 14, Chapter 4) and will be submitted CAL FIRE for review and approval following adoption of the MND.



Path: N:\companyfiles\01-Jobs Active\642-01 College of the Siskiyous Master Plan Update\3-Project GIS\3-Map Documents\CEQA Initial Study\Figure 2 - Existing Buildings 121420.mxd

Figure 2

Existing Buildings

All depictions are approximate. Not a survey product.

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ENPLAN

3.2 PROJECT COMPONENTS/PHYSICAL IMPROVEMENTS

Proposed improvements are identified below. **Figure 3** shows the buildings planned for demolition or relocation, and **Figure 4** shows the proposed new facilities.

- **Demolition:** Obsolete structures would be demolished, including the tennis courts (±27,500 square feet [SF]), a maintenance warehouse building (5,691 SF), maintenance shop (3,578 SF), old Physical Science building (3,025 SF), Eddy Hall (3,526 SF), McCloud Hall (10,630 SF), and the classroom wing (6,244 SF) of the Theater Building.

- **Construction of Maintenance Facilities:** To achieve the Facilities Master Plan objective of relocating all maintenance facilities away from the campus center, the existing maintenance warehouse building and maintenance shop north of the football field would be demolished (as noted above), and a new warehouse (5,691 SF) and shop (3,578 SF) would be constructed northeast of the Tactical Training Center.

- **Construction of Additional Student Housing:** New student housing (96,080 SF) would be constructed on the east side of campus south of Ponderosa and Juniper Halls.

- **Construction of New Tactical and Emergency Services Training Facilities:** In the southwestern area of the campus, a new four-story fire training prop would be constructed. A new building for Emergency Services Training Center (ESTC) classrooms (3,500 SF) would be constructed. A new garage for vehicle storage (860 SF) would be constructed.

- **Athletic Program Facilities:** As noted above, the tennis courts would be demolished; a new field house (40,000 SF) for indoor sports would be constructed in its place. An existing grass sports field, north of the football field, would be renovated for use as a soccer field, and a new practice field would be installed west of the football field. A new restroom (400 SF) would be constructed south of the existing snack bar. New grandstands (3,000 SF) would be located on the visitor side of the football field to provide additional seating for about 700 spectators. A new Sports Team Building (12,000 SF) would be constructed east of the football and soccer field and include team rooms and coaches' lookout. The existing gymnasium building would be extended to the south (2,000 SF).

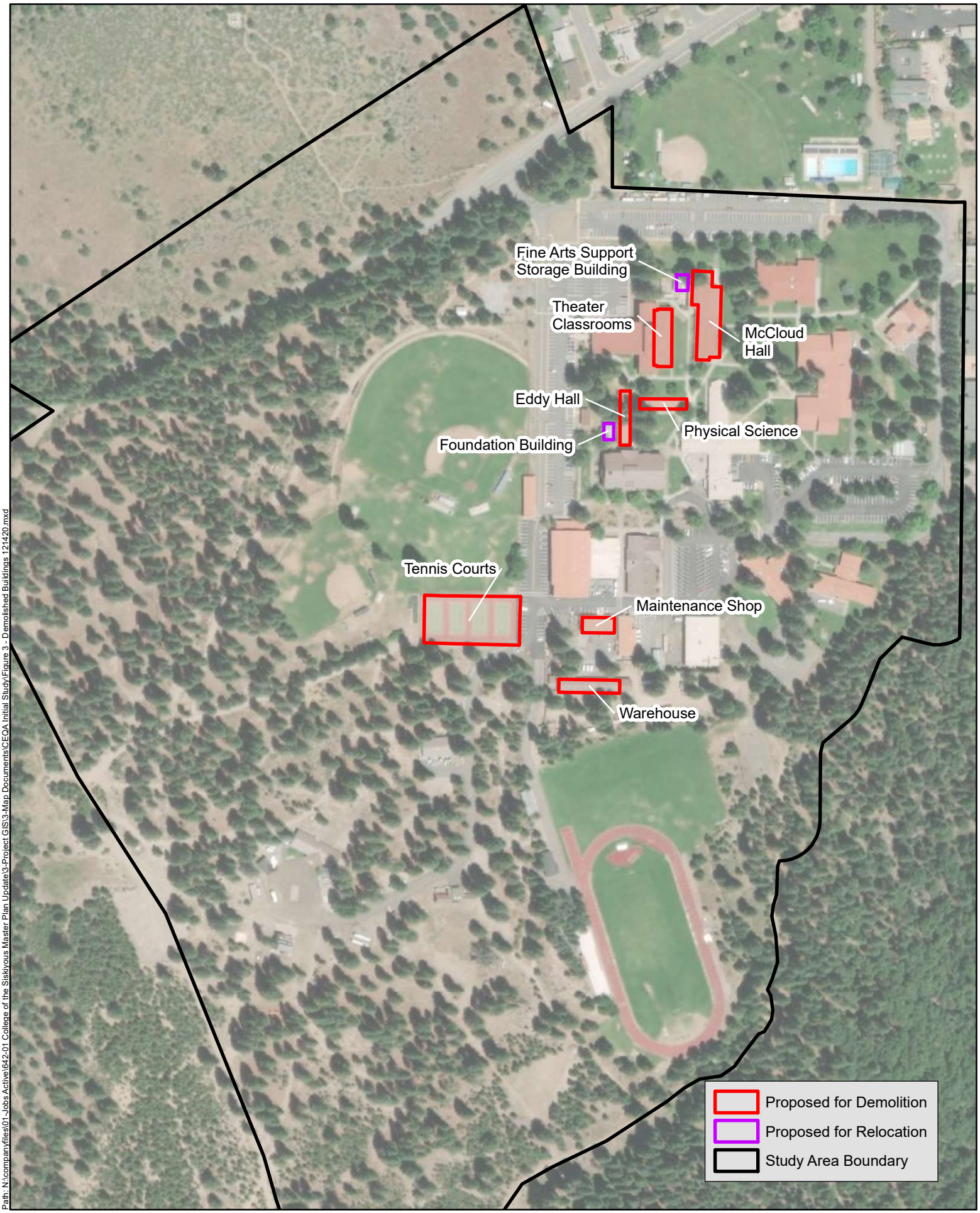
- **Construction of New Administrative/Academic Buildings:** A new academic building (18,800 SF) would be constructed south of the Student Center. A new office building (8,500 SF) would be constructed east of the Life Science building.

- **Renovation/Expansion of Theater Building:** Following demolition of McCloud Hall and the classroom wing of the theater building, the theater building would be extended to the east (28,411 SF). Structural improvements would be completed on the west side of the building.

- **Repurposing of Existing Buildings:** The Life Science building would be repurposed for administrative uses. Registration, student support programs, financial aid, counseling, the book/gift store, cafeteria, and related functions would be consolidated in the Student Center. Several other existing buildings or portions of existing building would be repurposed for other uses. The kitchen and cafeteria would be remodeled and expanded (6,000 SF) to expand meal service capabilities to the campus.

- **Relocation of Existing Buildings:** Two small buildings would be relocated: the Foundation Building (915 SF) and the Fine Arts Support Storage Building (1,046 SF). New locations for these buildings have not yet been identified.

- **Solar Field (1 megawatt):** Solar panels and appurtenant equipment would be installed in a ±two-acre area north/northwest of the campus on the north side of College Avenue. A new access road would be installed to allow for construction and long-term maintenance.



Path: N:\companyfiles\01-Jobs Active\642-01 College of the Siskiyous Master Plan Update\3-Project GIS\3-Map Documents\CEQA Initial Study\Figure 3 - Demolished Buildings 121420.mxd

Figure 3

All depictions are approximate. Not a survey product.

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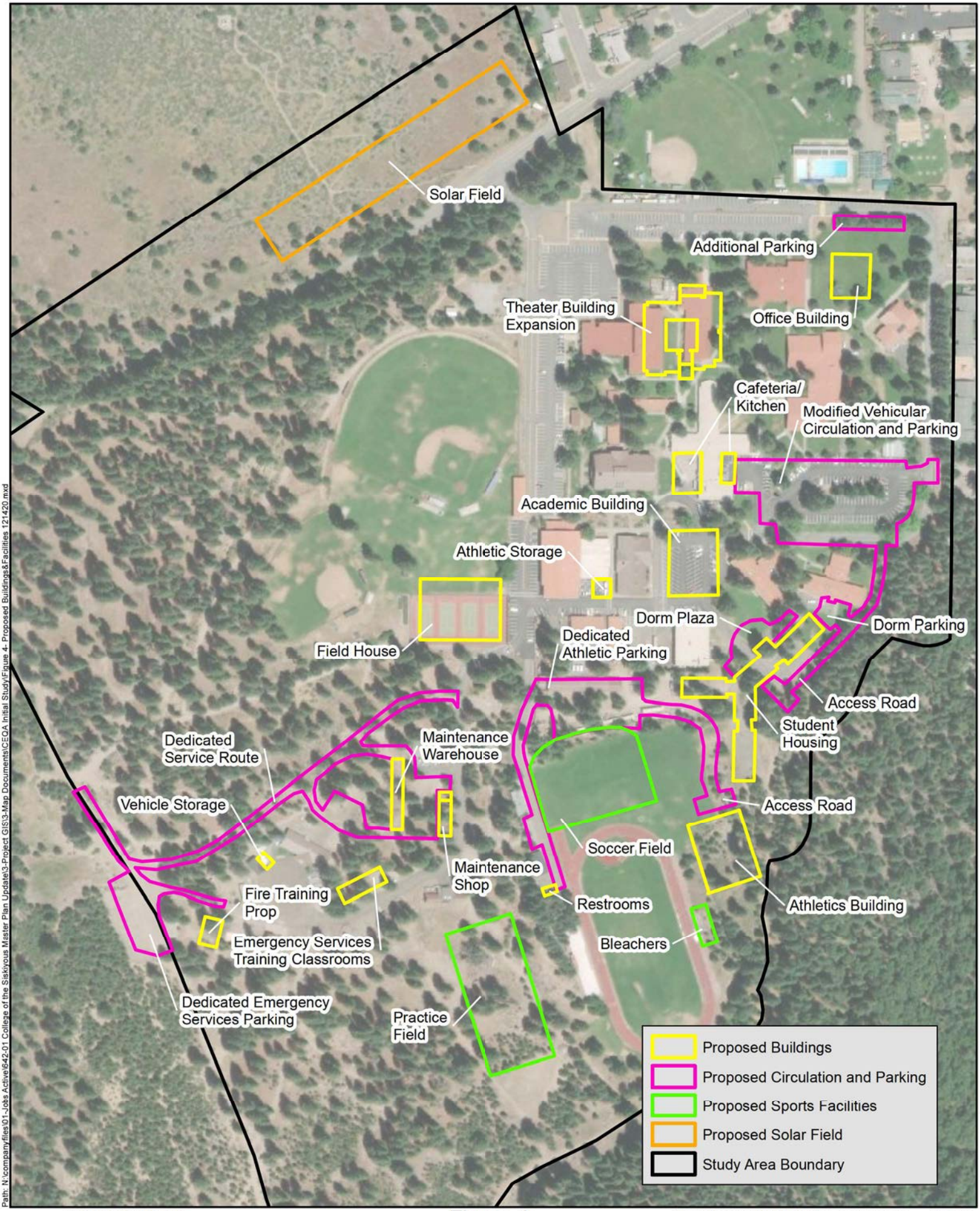
Proposed Demolition and Relocation

ENPLAN



Path: N:\companyfiles\01-Jobs Active\642-01 College of the Siskiyous Master Plan Update\3-Project GIS\3-Map Documents\CEQA Initial Study\Figure 4- Proposed Buildings&Facilities 121420.mxd

Depictions are not to scale.

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Figure 4
Proposed Facilities

All depictions are approximate. Not a survey product.

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ENPLAN

Access/Circulation

The main access to the campus is from College Avenue. A second access is provided from Siskiyou Way in the northeastern area of the campus. As shown in **Figure 4**, new roadways internal to the campus would be constructed, generally from the proposed Tactical and Emergency Services Training Facilities in the southwestern area of the campus to the proposed student housing building in the southeastern area of the campus. New parking is also proposed, primarily to serve the new emergency services training facilities, new student housing, and athletics facilities.

Utilities

COS receives potable water and water for fire protection from the City of Weed. The City installed new water mains and fire hydrants throughout the campus in the past ±five years. The campus has an established system that utilizes pumped groundwater to geothermally cool campus buildings. The cool water circulates through the buildings and is then distributed as irrigation water. There are presently four wells on the campus property. The wells are approximately 150 feet deep with a static level of 50 feet. Total well capacity exceeds 300 gallons per minute (GPM). It is believed that the aquifer for the water supply is part of the region's volcanic network originating from the snow pack of Mt. Shasta and other nearby mountains. The quality of the water is excellent.

The College is connected to the City's public sewer system. The College maintains its own sewage collection system, including pipes, several lift stations, and one sewage grinding station. Electricity is provided by PacifiCorp/Pacific Power.

Heating for some of the buildings is supplied by 11 propane-fired hydronic boilers. The main propane tanks are located in the southwestern area of the campus, ±150 feet east of the existing training tower. Electrical heat is used in several of the older buildings that are scheduled for demolition.

Stormwater Drainage and Performance Measures

As discussed in Section 4.10 (Hydrology and Water Quality), as required by the SWRCB's NPDES permit for *Discharges of Storm Water Runoff Associated with Construction Activity*, the applicant will implement post-construction measures to replicate the pre-project runoff water balance. Measures may include rooftop and impervious area disconnection (rerouting rooftop drainage pipes to drain rainwater to rain barrels, cisterns, or permeable areas instead of to the storm sewer); using porous pavement that allows runoff to pass through it; installing vegetated swales to treat and attenuate stormwater runoff and/or other effective measures.

Staging Areas

Temporary staging of materials and construction equipment would occur within the study area boundary.

SECTION 4.0 ENVIRONMENTAL ANALYSIS (CHECKLIST)

4.1 AESTHETICS

Except as provided in Public Resources Code §21099, 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

FEDERAL

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

STATE

California Scenic Highway Program

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

California Building Standards Code

Title 24 of the California Code of Regulations (CCR), also known as the California Building Standards Code (CBSC), is based on the International Building Code (IBC) and has been modified for California conditions to include more detailed and/or more stringent regulations. Part 11 of the CBSC is the Green Building Standards Code, also known as CALGreen. Section 5.106.8 (Light Pollution Reduction) of the CALGreen Code includes standards and restrictions for outdoor lighting systems. The intent of this requirement is to minimize light pollution in an effort to maintain dark skies and to ensure that newly constructed projects reduce the amount of backlight, uplight, light, and glare from exterior light sources. In the case of structures proposed by the District, the Division of the State Architect (DSA) is responsible for ensuring compliance with the CBSC and CALGreen Code.

LOCAL

City of Weed

The City's General Plan includes the following Goals, Objectives, Policies, and Programs related to aesthetics:

Community Design Element		
Goals	CD 1	An aesthetically pleasing community with a strong sense of place.
Objectives	CD 1.1	Uphold architectural compatibility and quality of new developments.
	CD 1.5	Protect the City's scenic views.
Policies	CD 1.1.1	Promote improvements in building design and architecture.
	CD 1.5.1	Preserve the City's natural landscape for residents and visitors to enjoy.
	CD 1.5.3	The City shall require a study to determine the impacts of new development proposals over 30 feet in height on scenic vistas.
Programs	CD 1.5.1.1	Designate areas of aesthetic beauty and significance to preserve viewsheds and scenic corridors.
	CD 1.5.1.2	Establish standards for development in areas adjacent to designated viewsheds and scenic corridors.
Open Space Element		
Goal	OS 3	Aesthetically pleasing parks and open space.
Objective	OS 3.2	Identify and protect scenic resources and viewsheds.
Policy	OS 3.2.1	The City shall maximize scenic resources and viewsheds through easements and zoning ordinances.
Program	OS 3.2.1.1	Identify and assess scenic resources and viewsheds.
	OS 3.2.1.2	Establish guidelines that ensure the protection of scenic resources and viewsheds.
	OS 3.2.1.3	Utilize design review for development on hillsides and within scenic viewsheds to protect hillsides.

DISCUSSION OF IMPACTS

Questions A and C

Scenic vistas are defined as expansive views of highly valued landscapes from publicly accessible viewpoints. Scenic resources in the project area include Mt. Shasta, Mt. Eddy, trees and other vegetation, open space, and forested hills that surround the campus. The campus property is visible to individuals living and working in the area, recreational users in Bel Air Park, and to travelers on College Avenue.

The most visually prominent of the proposed new facilities would be the solar field, which would be located on a south-facing hillside near the main campus entrance on College Avenue (**Photo 4.1-1**). The solar field site is visible from various locations on the campus property, recreational users in Bel Air Park, local residents, and to travelers on College Avenue. A few trees may need to be removed to

Photo 4.1-1. *View of solar field site from campus entrance, facing west.*

facilitate construction of the solar field and its access road. Additional trees between College Avenue and the solar field may need to be removed to provide better solar exposure for the solar panels. The solar field site is not in a designated scenic vista corridor; rather, it is within the City of Weed municipal limits and the proposed use is consistent with the zoning code. Therefore, impacts are considered less than significant.

The only other new facilities that would be readily visible to the public would be a new administrative building to be constructed in the northeastern area of the campus property, south of Bel Air Park, and the theater building expansion. Approximately four trees would need to be removed to accommodate the proposed administrative building. A row of trees north of the building would also be removed to provide parking near the building. Although the new administrative building would be visible from the park and from some of the residences on Siskiyou Way, existing trees to the north and east would partially screen the building. In addition, the visual character of the building would be in keeping with that of the rest of the college campus.

Theater building expansion would have a negligible visual effect because the new structure would be built in the footprint of McCloud Hall and the classroom wing of the theater building, which would be demolished. Minimal, if any tree removal would be needed. Thus, neither building mass nor building screening would be significantly changed as a result of the proposed demolition/construction work.

All other proposed facilities would be in the interior of the campus site and would be minimally, if at all, visible to the public. The new field house would be located ±800 feet from College Avenue. The fire training prop would be over 750 feet from College Avenue, and new student housing would be over 1,400 feet from College Avenue. Although some tree removal would be required to accommodate these and other proposed facilities, existing screening around the campus would provide a strong visual barrier from public viewpoints. As shown in **Photo 4.1-2**, native trees along the property frontage of College Avenue screen views of the majority of the campus property, including the proposed new structures.

Photo 4.1-2. *View of campus from College Avenue to the southeast, west of the campus entrance.*

Although final designs are not available, a number of the new buildings are expected to exceed 30 feet in height, which is the City of Weed's threshold for requiring a study of the impacts of the new buildings on scenic vistas. As a good-faith effort to address local standards, the potential for such visual impacts has been evaluated and found to be negligible. The City of Weed General Plan Environmental Impact Report (EIR) identifies views of Mt. Shasta as being one of the community's most important aesthetic features. Other important features include the historic downtown and gateway signage.

The College of the Siskiyous campus is visually isolated from the historic downtown and would have no effect with respect to interfering with views of the urban area. Further, the campus as a whole has a relatively limited visual exposure. Hills to the south and north of the campus limit views from those directions. The College owns a substantial amount of undeveloped land to the west of the campus core (managed under a Non-Industrial Timber Management Plan), which screens the campus from the west. Because the campus is on the western edge of the City, the new facilities have no potential to block views of Mt. Shasta from elsewhere in the City. Likewise, from the local level (i.e., from College Avenue, Siskiyou Way, and other local roads), proposed building heights will be compatible with existing buildings or will have sufficient setbacks such that there is no significant visual intrusion.

Therefore, because impacts during construction are temporary and would cease at completion of the improvements, and the DSA would ensure compliance with Title 24 of the California Code of Regulations, impacts would be less than significant.

Question B

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

Question D

Construction of new buildings would include the installation of new permanent exterior lighting. As stated under Regulatory Context, the CALGreen Code includes standards and restrictions for outdoor lighting systems to minimize light pollution. Lighting for the project would be shielded from adjacent properties and designed to minimize the potential for unnecessary lighting of the night sky. With respect to the solar panels, they are designed to absorb rather than reflect light, would not create a significant source of glare, and would not create a hazard to the traveling public on College Avenue or a nuisance for people residing and/or working in the area. It is the responsibility of the DSA to review construction documents, including electrical plans and specifications for exterior lighting, prior to issuance of a building permit to ensure that CALGreen requirements for outside lighting conform to adopted standards. Therefore, 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's General Plan. All new development projects in the City not under the jurisdiction of the DSA are subject to design standards to ensure new development is consistent with the City's aesthetic vision for the community. In addition, all new development projects on the campus are subject to CALGreen requirements for outdoor lighting to minimize light pollution. Therefore, the proposed project's impacts would not be cumulatively considerable.

MITIGATION

None necessary.

DOCUMENTATION

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City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed October 2020.

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 section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) or result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐
d. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☒	☐

REGULATORY CONTEXT

FEDERAL

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

STATE

California Farmland Mapping and Monitoring Program (FMMP)

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

Williamson Act

The Williamson Act (California Land Conservation Act of 1965) was enacted as a means to protect agricultural uses in the State. Under the Williamson Act, local governments can enter into contracts with private landowners to ensure that specific parcels are restricted to agricultural and related open space uses. In return, landowners receive reduced property tax assessments.

Public Resources Code (PRC) §12220(g)

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

resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Z'berg-Nejedly Forest Practice Act of 1973

Timberland in California is managed under the provisions of the Z'Berg-Nejedly Forest Practice Act of 1973 (Public Resources Code §4511 *et seq.*). PRC §4526 defines timberland as *"land, other than land owned by the federal government, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees."*

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

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

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

California Timberland Productivity Act of 1982

The Timberland Productivity Act of 1982 (Government Code §51104) defines timberland as privately owned land, or land acquired for state forest purposes, which is devoted to and used for growing and harvesting timber, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre. The Act established Timberland Production Zones (TPZ) for the purpose of discouraging the premature conversion of timberland to other uses. TPZs are rolling ten-year contracts that provide preferential tax assessments to qualified timberlands. Government Code §51104(g) defines TPZ as *"an area which has been zoned pursuant to [Government Code] §51112 or §51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h)."*

LOCAL

City of Weed

The City's General Plan includes the following Goals, Objectives, Policies, and Programs related to agriculture and forest resources:

Conservation Element		
Goal	CO 4	Preservation of forestland and timber resources.
Objective	CO 4.1	Balance the use of oak woodlands and timber as valuable resources without impacting the existing ecosystem.
Policies	CO 4.1.1	New projects shall have carefully planned roads, cuts and fills, building foundations, and septic systems to avoid damage to tree roots.
	CO 4.1.2	For new projects, the City shall require that roads and utility services be consolidated to minimize the environmental impact of development. The City should also require reseeding any disturbed ground.
	CO 4.1.3	Trees that were removed during construction shall be replaced.

Program	CO 4.1.3.1	Develop a 5-year Monitoring Plan for replaced trees, including maintenance and replacement of trees that do not thrive.
Health Element		
Goal	HE 1	A community with access to healthy food.
Objective	HE 1.2	Expand sustainable local food systems and urban agriculture.
Policy	HE 1.2.1	Invest in opportunities for cultivating, processing, and distributing food within Weed.
Program	HE 1.2.1.1	Work with non-profits and regulatory agencies to assess the potential for creating, expanding, and sustaining local urban agriculture, including community gardens, orchards, and farmers' markets. Urban agriculture may supplement the availability of fresh fruit and vegetables in the community, provide economic opportunities to Weed's residents, lower food costs, reduce overall energy consumption, and foster community building.

DISCUSSION OF IMPACTS

Questions A, B, and D

According to the *Important Farmland in California* map published by the FMMP, neither the project site nor surrounding properties are designated as prime farmland, unique farmland, or farmland of statewide importance; however, the proposed solar field site is designated as farmland of local importance. In Siskiyou County, farmland of local importance includes dryland, or sub-irrigated hay and grain, and improved pasture forage species; farmlands presently irrigated but which do not meet the soil characteristics of prime farmland or farmland of statewide importance; and areas currently shown as prime agricultural land in the Siskiyou County General Plan.

Although the solar field site is designated as farmland of local importance, review of aerial photographs from 1993 through 2019 indicate that the property has not historically been used for agricultural purposes. In addition, the solar field site is not irrigated, and the soil type (Neer-Ponto stony sandy loams, 15 to 50 percent slopes, complex) is not considered prime farmland. Further, according to the NRCS, the land capability classification for the soil indicates that it has severe limitations that make it generally unsuitable for cultivation.

There are no lands in the project area that are zoned for agricultural production, and the Siskiyou County General Plan does not identify the property as prime agricultural land. Further, the project site is not under a Williamson Act contract.

Because the proposed project would not convert prime farmland, unique farmland, or farmland of statewide importance, would not conflict with zoning or a Williamson Act contract, and does not include any components that would have an indirect effect on farmland, impacts would be less than significant.

Question C

As described under Regulatory Context, undeveloped areas in the study area meet the definition of forest land pursuant to PRC §12220(g) and timberland pursuant to PRC §4526, and development in these areas is subject to the California Forest Practice Rules (CAL FIRE, 2020), including the requirement to obtain timber harvest approval and a timberland conversion permit from CAL FIRE prior to earth disturbance in these areas.

Pursuant to PRC §4593 *et seq.*, a private landowner has the option to prepare a Non-Industrial Timber Management Plan (NTMP) that allows for the "uneven aged management" of timberland that is 2,500 acres or less. Uneven aged management is defined as the management of a specific forest, with the goal of establishing a well-stocked stand of various age classes, which permits the periodic harvest of individual or small groups of trees to realize the yield and continually establish a new crop. Compliance with the NTMP preserves scenic values, protects water quality, and preserves habitat for fish and wildlife.

As stated in Section 3.1, in November 2005, CAL FIRE approved a NTMP (#2-05NTMP-007) for ±210 acres of undeveloped land owned by Siskiyou Joint Community College District. In order to accommodate the proposed improvements, College of the Siskiyous (COS) is applying for a Timber Harvesting Plan (THP) and Timberland Conversion Permit (TCP) for the ±113-acre project site.

Figure 4.2-1 shows the area currently being managed under the NTMP that will be included in the TCP/THP boundary. Approximately 63 acres of the ±113-acre project site are included in the NTMP boundaries, and operations under the NTMP have been suspended pending completion of pertinent improvements under the Facility Master Plan. It is likely that an amendment to the NTMP will be required prior to future THP operations, the nature of which is speculative at this time.

The objective of the TCP/THP is to facilitate improvement, renovation, and modernization of facilities. In total, it is estimated that less than nine percent of the project area (no more than about ten acres) would actually be converted upon implementation of the Facility Master Plan. The fact that the project site is much larger does not indicate that the entire site would be denuded. Rather, the project boundary has been defined to maximize flexibility for COS to implement the Facility Master Plan. Further, the project footprint reflects the broad definition of "timberland" as presented in California code. Under this definition, with the exception of the paved and built areas, all of the campus is defined as timberland because it is "available for and capable of" growing a commercial crop of trees. Not all of this area is timbered, and the vast majority of trees in the study area would be retained.

A detailed evaluation of the effects of timber harvest and timberland conversion is provided in the TCP and THP (Lindler, 2020) and supports the conclusion that the proposed project would not result in a significant adverse impact with respect to the loss of forest land or conversion of forest land to non-forest use, either individually or cumulatively. Impacts would be less than significant.

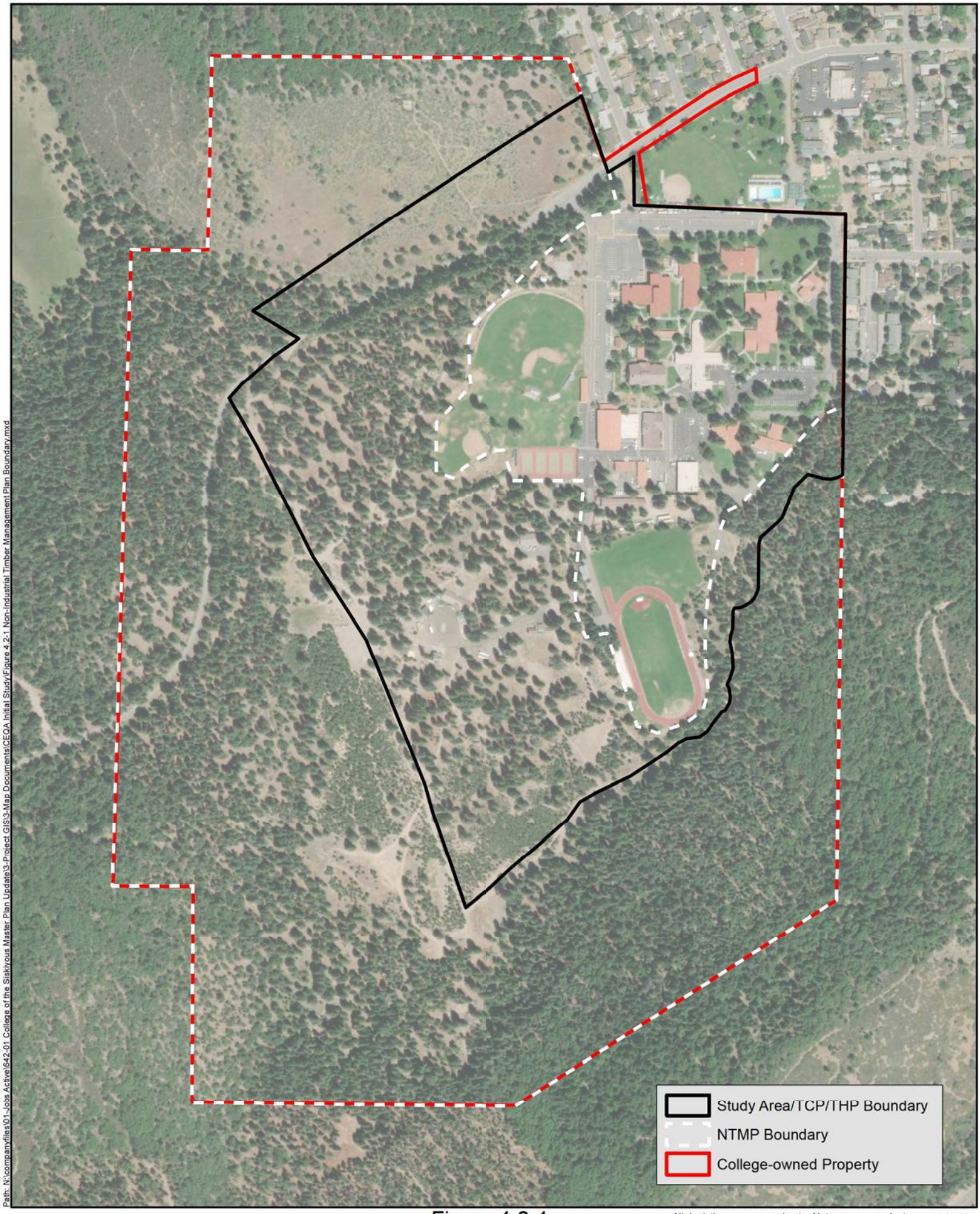
CUMULATIVE IMPACTS

Potential cumulative projects in the area include growth according to the build-out projections in the City's and County's General Plans. As documented above, the proposed project would not convert prime farmland, unique farmland, or farmland of statewide importance, would not conflict with zoning or a Williamson Act contract, and does not include any components that would have an indirect effect on farmland. Therefore, the impact of the proposed project to farmland would not be cumulatively considerable.

The project would result in conversion of timberland to non-timberland uses. Although only a few acres of land would actually be subject to tree removal, the TCP and THP address the entire 113-acre study area. Siskiyou County contains roughly 3,100,000 acres of timberland. The proposed project is comprised of 113 acres, or less than 0.001% of total timberland in the county. This percentage is insignificant, even assuming that all 113 acres would actually be converted under this project, which it would not. Therefore, as further addressed in the TCP and THP (Lindler, 2020), the cumulative contribution of the proposed project to the loss of timberland or forest land in Siskiyou County is less than significant.

MITIGATION

None necessary.



Path: N:\companyfiles\01-Jobs Active\642-01 College of the Siskiyous Master Plan Update\3-Project GIS\3-Map Documents\CEQA Initial Study\Figure 4.2-1 Non-Industrial Timber Management Plan Boundary.mxd

Figure 4.2-1

Site and Timber Management Boundaries

All depictions are approximate. Not a survey product.

11.05.20

0 500 Feet

ENPLAN

DOCUMENTATION

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4.3 AIR QUALITY

Would the project:

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

REGULATORY CONTEXT

FEDERAL

Federal Ambient Air Quality Standards

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

TABLE 4.3-1
Federal Criteria Air Pollutants

Pollutant	Characteristics	Primary Effects	Major Sources
Ozone (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}) are inhalable into the lungs and can induce adverse health effects. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter ($PM_{2.5}$). Therefore, $PM_{2.5}$ comprises a portion of PM_{10}.	• Premature death. • Hospitalization for worsening of cardiovascular disease. • Hospitalization for respiratory disease • Asthma-related emergency room visits. • Increased symptoms, increased inhaler usage	Dust- and fume-producing construction activities, power plants, steel mills, chemical plants, unpaved roads and parking lots, woodburning stoves and fireplaces, wildfires, motor vehicles, and other combustion sources. Also a result of photochemical processes.
Lead	A heavy metal that occurs both naturally in the environment and in manufactured products.	• Impaired mental functioning in children • Learning disabilities in children • Brain and kidney damage. • Reproductive disorders. • Osteoporosis.	Lead-based industrial production (e.g., battery production and smelters), recycling facilities, combustion of leaded aviation gasoline by piston-driven aircraft, and crustal weathering of soils followed by fugitive dust emissions.

STATE

State Ambient Air Quality Standards

The California 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 (CAAQSs). 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 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. Most vinyl chloride is used to make PVC plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites due to microbial breakdown of chlorinated solvents. Primary effects include dizziness, drowsiness, headaches, and liver damage.

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

TABLE 4.3-2
Federal and State Ambient Air Quality Standards

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

Source: CARB 2016. Notes: mg/m^3=milligrams per cubic meter; ppm=parts per million; ppb=parts per billion; µg/m^3=micrograms per cubic meter

Toxic Air Contaminants

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

Mobile Source Strategy

CARB's Mobile Source Strategy, adopted in 2016, describes the State's strategy for containing air pollutant emissions from vehicles, and demonstrates how the State can simultaneously meet air quality standards, achieve Greenhouse Gas (GHG) emission reduction targets, decrease health risks from transportation emissions, and reduce petroleum consumption over the next fifteen years.

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

SB 210, signed by the Governor on September 20, 2019, recognizes that communities near highways and roads with high levels of truck traffic bear the burden of heavy-duty trucks that are not maintained. According to CARB, as of 2016, heavy-duty trucks operating in the State emitted nearly 60 percent of all NO_X emissions from on-road mobile sources. Heavy-duty diesel trucks are also the largest source of diesel particulate matter emissions in the State.

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

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

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

California Energy Code

The California Energy Code (Part 6 of the CBSC), also known as the State's Energy Efficiency Standards, was established by the California Building Standards Commission in 1976 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. Section 120.1 of the State Energy Code includes requirements for ventilation and indoor air quality. Section 120.1(c) requires all occupiable spaces in nonresidential buildings to implement air filtration systems to clean the outside and return air prior to its introduction into occupied spaces.

LOCAL

Siskiyou County Air Pollution Control District (SCAPCD)

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

City of Weed

The City's General Plan includes the following Goals, Objectives, Policies, and Programs related to air quality:

Health Element		
Goal	HE 6	A community with improved environmental quality.
Objective	HE 6.1	Protect human and environmental health and minimize disproportionate impacts on sensitive population groups.
Policy	HE 6.1.1	Support regional and state policies to reduce the impact of direct, indirect, and cumulative impacts of stationary and non-stationary sources of pollution such as industry, diesel trucks, and busy roadways.
Program	HE 6.1.1.1	Work with the Siskiyou County Air Pollution Control District and other government agencies to establish funding for a citywide air quality monitoring and reporting program. The program should assess the cumulative impacts of air pollution and toxins on human and environmental health and monitor exposure of sensitive uses such as schools, parks and playgrounds, nursing homes, housing, and community gathering areas.
Air Quality Element		
Goal	AQ 1	Clean air for residents and visitors.
Objective	AQ 1.1	Protect and improve local air quality.
Policy	AQ 1.1.1	The City shall maintain attainment status for all state and federal mandated criteria air pollutants.
Programs	AQ 1.1.1.1	Identify point and non-point sources of criteria air pollutants.
	AQ 1.1.1.2	Monitor and report on the status of criteria air pollutants.
	AQ 1.1.1.3	Collaborate with polluting industries to mitigate the emission of criteria air pollutants to a feasible extent.

DISCUSSION OF IMPACTS

Questions A and B

As discussed under Regulatory Context, for areas within the State that have not attained air quality standards, the CARB works with local air districts to develop and implement attainment plans to obtain compliance with both federal and State air quality standards. Because Siskiyou County is currently designated in attainment or unclassified status for all federal and state criteria pollutants, the County is not required to have a local air quality attainment plan; therefore, the proposed project would have no impact.

Question C

See discussion under Regulatory Context above and Section 4.7 (Greenhouse Gas Emissions). Project emissions were estimated using Version 2016.3.2 of the California Emissions Estimator Model (CalEEMod). CalEEMod provides default values when site-specific inputs are not available. CalEEMod does not directly calculate ozone emissions. Instead, the emissions associated with ozone precursors (ROG and NO_X) are calculated. For the proposed project, site-specific inputs and assumptions include, but are not limited to, the following:

- Although construction of project components is based on the availability of funding, to represent a worst-case scenario, the CalEEMod analysis was based on all project components being completed concurrently.

- Emissions from construction are based on all construction-related activities associated with proposed and future uses, including but not limited to grading, use of construction equipment, material hauling, trenching, and site preparation.
- Emissions from operation of the proposed project are based on all proposed and future operational activities, including vehicle traffic, electricity usage in the buildings and for lighting in parking lots, water use, wastewater treatment, solid waste disposal, use of architectural coatings, etc. Because some existing buildings will be demolished, only the net increase in building square footage is evaluated for operational emissions.
- According to College of the Siskiyous (COS) projections, the on-campus student population is anticipated to increase by about 105 students at build-out of the Master Plan; staffing levels are anticipated to increase by about 15. The net increase in average daily trips was adjusted accordingly.
- Proposed on-campus housing would accommodate up to 396 students, resulting in a decrease in vehicle miles traveled (VMT).
- It is conservatively estimated that the solar photovoltaic (PV) system would generate 50 percent of the energy required for the newly constructed buildings.
- It is estimated that implementation of the project will result in the removal of ten acres of vegetation on the COS campus.

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

Construction Emissions

The proposed project would result in the temporary generation of ROG, NOx, PM_{10}, and other regulated pollutants during construction. ROG and NOx emissions are associated with employee vehicle trips, delivery of materials, and construction equipment exhaust. PM_{10} would be generated during demolition, site preparation, excavation, paving, and from exhaust associated with construction equipment.

Although neither the City of Weed nor the SCAPCD have adopted specific thresholds for construction-related emissions, the City typically references current SCAPCD rules, including Rule 6.1 (Construction Permit Standards for Criteria Pollutants), which includes thresholds for new or modified stationary sources. As stated under Regulatory Context above, the SCAPCD has defined 250 pounds (lbs)/day as the threshold of significance for NO_X, $PM_{2.5}$, PM_{10}, and SO_2 emissions, and 2,500 lbs/day as the threshold of significance for CO emissions.

Table 4.3-3 shows the highest daily levels regardless of construction phase; as indicated, construction of the proposed project would not exceed Siskiyou County's thresholds for any of the pollutants.

TABLE 4.3-3
Projected Construction Emissions

Pollutants of Concern (Maximum Pounds per Day)					
ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**
23.1	61.4	9.04	5.56	51.64	0.1

Nonetheless, sensitive receptors adjacent to the construction area would be exposed to elevated dust levels and other pollutants. 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.

Construction activities on the COS campus property would occur ±100 feet south of Bel Air Park, ±175 feet west of residences on Siskiyou Way, and ±500 feet west of a residence at the southern end of Walnut Street. Installation of the solar field would occur ±75 feet west of residences on Bel Air Avenue. Compliance with federal, state, and local regulations, and implementation of **Mitigation Measure (MM) 4.3.1** would reduce temporary impacts during construction to a less-than-significant level.

Operational Emissions

Operation of the project would generate criteria pollutants from area sources (e.g., cleaning supplies, maintenance activities such as painting, landscape equipment etc.) and mobile sources (e.g., vehicle trips for employees, students, visitors, vendors, deliveries, etc.), as well as indirect emissions associated with energy use, solid waste disposal, water treatment and distribution, and wastewater treatment. Sensitive receptors that could be affected by operational emissions include individuals at Bel Air Park and residences on Siskiyou Way and Walnut Street.

As indicated in **Table 4.3-4**, operational emissions would not exceed the SCAPCD's thresholds for any of the pollutants.

TABLE 4.3-4
Projected Operational Emissions

Pollutants of Concern (Pounds per Day)						
Source	**ROG**	**NOx**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**
Area	5.91	0.12	0.06	0.06	10.26	Trace
Energy	0.08	0.68	0.05	0.05	0.52	Trace
Mobile	2.85	25.47	6.21	1.71	23.01	0.12
Total	**8.84**	**26.27**	**6.32**	**1.82**	**33.79**	**0.12**

Neither construction nor operation of the proposed project would result in significant impacts associated with ozone (O_3), lead (Pb), hydrogen sulfide (H_2S), vinyl chloride, or visibility reducing particles, as discussed below.

Ozone. CalEEMod does not directly calculate ozone emissions. Instead, the emissions associated with ozone precursors (ROG and NO_X) are calculated. Because project construction and operation would generate relatively low amounts of 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 by geothermal power plants, petroleum refineries, and during the decomposition of organic material in anaerobic environments, including sewage treatment processes. Although the proposed project would generate wastewater, the increased wastewater volume would not result in a significant increase in hydrogen sulfide emissions.

Vinyl chloride. Vinyl chloride is used to manufacture polyvinyl chloride (PVC) plastic and other vinyl products. Approximately 98 percent of vinyl chloride produced in the United States is used during the manufacture of PVC. Additionally, vinyl chloride is produced during the microbial

breakdown of chlorinated solvents (e.g., engine cleaner, degreasing agent, adhesive solvents, paint removers, etc.). The potential for vinyl chloride exposure is primarily limited to areas in close proximity to PVC production facilities. Because PVC manufacturing facilities are absent from the project area, and project implementation would not result in an increase of chlorinated solvents, potential vinyl chloride emissions associated with the proposed project would be less than significant.

Visibility-reducing pollutants. Visibility-reducing pollutants generally consist of sulfates, nitrates, organics, soot, fine soil dust, and coarse particulates. These pollutants contribute to the regional haze that impairs visibility, in addition to affecting public health. According to the California Regional Haze Management Plan, natural wildfires and biogenic emissions are the primary contributors to visibility-reducing pollutants. Because relatively small amounts of particulates would be generated during construction and operations, potential impacts with respect to visibility-reducing pollutants are less than significant.

Therefore, impacts would be less than significant because **MM 4.3.1** would reduce temporary impacts during construction, and the project does not include any operational components that would expose sensitive receptors to substantial pollutant concentrations.

Question D

Construction activities that have the potential to emit odors and similar emissions include diesel equipment, paints, solvents, fugitive dust, and adhesives. Odors and similar emissions from construction are intermittent and temporary, and generally would not extend beyond the construction area. Due to the temporary and intermittent nature of construction odors, impacts during construction would be less than significant.

Odors and similar emissions associated with operation of the proposed project include emissions from vehicles, maintenance activities (painting, pavement maintenance, re-roofing, etc.), use of gas-powered landscape equipment, and similar activities. Operational odors and similar emissions would be intermittent and are not expected to be significantly greater than existing conditions. Therefore, operational 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. As stated above, 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** and compliance with CARB and SCAPCD regulations ensures that the proposed project would have a less-than-significant cumulative impact on local and regional air quality.

MITIGATION

MM 4.3.1 The following measures shall be implemented throughout construction:

a. All material excavated, stockpiled, or graded shall be covered or sufficiently watered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of ambient air quality standards. Watering shall occur at least twice daily with complete site coverage, preferably in the mid-morning and after work is completed each day.

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

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

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

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

f. All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least two feet of free board in accordance with the requirements of Section 23114 of the California Vehicle Code. This provision is enforced by local law enforcement agencies.

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

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

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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 Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife 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 RWQCB regulates waters of the State and has a policy of no-net-loss of wetlands. The RWQCB typically requires mitigation for impacts to wetlands before it will issue a water quality certification.

Federal Endangered Species Act

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

Federal Migratory Bird Treaty Act

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

Fish and Wildlife Conservation Act

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

Bald and Golden Eagle Protection Act

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

Magnuson-Stevens Fishery Conservation and Management Act

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

STATE

California Endangered Species Act

Under the California Endangered Species Act (CESA), the Fish and Game Commission is responsible for listing and delisting threatened and endangered species, including candidate species for threatened or endangered status. CDFW provides technical support to the Commission, and may submit listing petitions and assist with the evaluation process. CDFW maintains documentation on listed species, including occurrence records. In addition, CDFW maintains a list of fully protected species, most of which are also listed as threatened or endangered. CDFW also maintains a list of species of special concern (SSC). SSC are vulnerable to extinction but are not legally protected under CESA; however, impacts to SSC are generally considered significant under the California Environmental Quality Act (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 §3503 and 3503.5 (Nesting Bird Protections)

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

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

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

Oak Woodlands Conservation Act

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

LOCAL

City of Weed

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

Land Use Element		
Goal	LU 1	A balanced and diversified set of land uses within the City.
Policy	LU 1.3.2	Preserve open space to retain the natural scenic beauty and ecology within Weed.
Conservation Element		
Goals	CO 3	A community with a thriving natural habitat.

	CO 5	A balanced community between nature and the built environment.
Objectives	CO 3.1	Protect state and federally listed candidate, threatened, and endangered species that reside within city limits.
	CO 3.2	Preserve open space for habitat conservation. Maintain biodiversity in plant communities and wildlife habitats.
	CO 5.1	Protect Weed's natural setting from urban development encroachment.
	CO 5.2	Maximize utility of natural resources through reuse and resource recovery.
Policies	CO 3.1.1	Comply with federal and state legislation regarding the protection of special-status species and habitats as defined by the U.S. Fish and Wildlife Service.
	CO 3.2.1	New development shall not disturb any critical habitats identified through biological resources assessments. Promote infill development that lessens the impacts of community growth on natural habitats.
	CO 5.1.1	Preserve habitat linkages to provide wildlife corridors and protect natural wildlife ranges by prohibiting development in designated biological resource zones.
	CO 5.2.1	Invest in landscaping public facilities with native or drought tolerant plants where possible to reduce or eliminate the need for irrigation while enhancing the environment with biodiverse vegetation.
	CO 5.2.2	The City shall plant large canopy shade trees where appropriate and with consideration to natural habitats and water conservation goals, to maximize environmental benefits.
Programs	CO 3.1.1.1	Require environmental review for new development to identify potential impacts on threatened and endangered plant and animal species.
	CO 3.2.1.1	Conduct biological resources assessments by a qualified biologist to inventory wildlife habitats, corridors, and restoration needs.
	CO 5.1.1.1	Require evaluation, avoidance, and minimization of potential significant impacts as well as mitigation of unavoidable impacts to biological resources.
	CO 5.2.2.1	Integrate urban forestry into the City by planting trees and managing storm runoff.
	CO 5.2.2.2	Develop and adopt a Community Street Tree Plan.
	CO 5.2.2.3	Develop and implement a landscape plan to preserve oak woodlands and critical vegetation.

DISCUSSION OF IMPACTS

Question A

The evaluation of potential impacts on candidate, sensitive, and/or special-status species entailed records searches and field evaluations. The records searches included a review of California Natural Diversity Data Base (CNDDB) records for special-status plants and wildlife; California Native Plant Society records for special-status plant species; federal records for listed, proposed, and candidate plant and wildlife species under jurisdiction of the USFWS and NMFS; critical habitat data maintained by the USFWS and NMFS; and essential fish habitat (EFH) data maintained by the NMFS.

To determine the presence/absence of special-status plant and animal species in the study area, an ENPLAN biologist conducted botanical and wildlife surveys on April 29, August 15, and August 22, 2020. The special-status plant species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. Most 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.

Appendix B includes the following:

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

Special-Status Plant Species

Review of the USFWS species lists for the project area identified one federally listed plant species, whitebark pine, as being potentially present in the project area and/or being potentially affected by the proposed project. The project area does not contain designated critical habitat for federally listed plant species.

Review of CNDDB records found that one special-status plant species, subalpine aster, has been broadly mapped in the project area. Ten other special-status plant species have been reported within a five-mile radius of the project site: alkali hymenoxys, coast fawn lily, Henderson's triteleia, Oregon fireweed, pallid bird's-beak, Peck's lomatium, Pickering's ivesia, Shasta chaenactis, snow fleabane daisy, and woolly balsamroot. Although the above species have the highest potential to occur in the study area, a 9-quadrangle search of CNDDB and CNPS records was also conducted to provide a broader view of special-status plants that could potentially be present.

A total of 52 special-status plant species were identified through the 9-quadrangle records search. A list of these 52 species is provided in **Appendix B**, along with an evaluation of the potential for each species to occur within the study area.

A botanical survey of the study area was conducted by ENPLAN botanist Donald Burk on April 28, August 15, and August 22, 2020. No attempt was made to identify plant species within the urbanized campus core; the survey focused on the natural and semi-natural communities surrounding the campus core. These areas were covered through an intensive, intuitive-controlled floristic survey. A list of plant species observed during the field survey is included in **Appendix B.** No special-status plant species were observed or are expected to occur on the project site. Therefore, the proposed project would have no impact on special-status plant species.

Special-Status Wildlife Species

Review of the USFWS species list for the project area identified ten federally listed wildlife species as being potentially present in the project area and/or being potentially affected by the proposed project: gray wolf, North American wolverine, northern spotted owl, yellow-billed cuckoo, Oregon spotted frog, Lost River sucker, shortnose sucker, conservancy fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp. The USFWS does not identify designated critical habitat in the study area for any federally listed wildlife species. Review of the NMFS data for the Weed quadrangle found that

critical habitat is present for the Southern Oregon/Northern California Coast (SONCC) Coho salmon and that EFH is present for both Coho and Chinook salmon.

Review of CNDDB records did not identify any special-status wildlife species as being previously observed on the project site. However, two non-status wildlife species have been broadly mapped as occurring in the project area: North American porcupine and silver-haired bat. The following four special-status wildlife species have been reported within a five-mile radius of the project site: Cascades frog, fisher-west coast DPS, Lower Klamath marbled sculpin, and western yellow-billed cuckoo. In addition to the porcupine and silver-haired bat, the following three non-status wildlife species have also been reported in the search radius: gray-headed pika, Siskiyou hesperian, and Wawona riffle beetle.

Wildlife species observed during the field surveys included California ground squirrels, gray squirrels, chipmunks, turkey vultures, Stellar's jays, pileated woodpeckers, red-tailed hawks, chickadees, and western fence lizards; a wide variety of other species is expected to utilize the site at certain times of the year. **Appendix B** contains an evaluation of the potential for state and federal special-status wildlife species to occur in the project area. As indicated in the table, none of the special-status wildlife species identified through the records review is expected to occur in the study area.

Although the Weed quadrangle includes designated critical habitat for the Southern Oregon/Northern California Coast (SONCC) Coho salmon and EFH for both Coho and Chinook salmon, no fish-bearing streams are present in or near the project site. Therefore, these species and their habitats would not be directly affected by project implementation. The potential for indirect effects on anadromous fish and their habitats would be adequately reduced through implementation of Best Management Practices (BMPs) for erosion control and spill prevention, as required through the Nation Pollutant Discharge Elimination System (NPDES) permit for *Discharges of Storm Water Runoff Associated with Construction Activity* (currently Order No. 2009-009-DWQ, amended by 2010-0014-DWQ & 2012-0006-DWQ), also known as the Construction General Permit.

Questions B and C

According to CDFW, since the inception of the Natural Heritage Program in 1979, natural communities have been considered for their conservation significance (CDFW, 2017). Unique natural communities were recorded in the CNDDB until the mid-1990s; at that time, funding for the natural community portion of the program was eliminated. Although natural communities are no longer being added to the CNDDB, many of the natural community occurrences maintained in the CNDDB still have significance for conservation, and their existence should be considered in the environmental review process.

CNDDB records do not identify any sensitive natural communities within a five-mile radius of the project site. Other records reviewed for sensitive natural communities included those maintained by the USFWS and NMFS. The USFWS does not identify any designated critical habitats for federally listed species within the study area. As noted above, although the Weed quadrangle includes designated critical habitat for the SONCC Coho salmon and EFH for both Coho and Chinook salmon, no fish-bearing waters are present on the project site; potential indirect effects on anadromous fish and their habitats would be adequately reduced through implementation of BMPs for erosion control and spill prevention, as required under the Construction General Permit.

The principal natural communities in the study area are urban, ponderosa pine forest, and mixed chaparral. In addition, one wetland and several ditches are present in the study area.

Urban habitat is present throughout the core campus. The urbanized area includes lecture halls, student housing, ancillary buildings, roads, parking spaces, landscaping, and other infrastructure. The landscaping includes ample native vegetation as well as ornamental shrubs and grass lawns interspersed among the developed elements.

Ponderosa pine habitats are defined as forests in which at least 50 percent of the canopy area is ponderosa pine. Associated species vary depending on location in the state and site conditions. Typical tree associates include white fir, incense-cedar, Jeffrey pine, sugar pine, Douglas-fir, canyon live oak, California black oak, Oregon white oak, Pacific madrone, and tanoak (CDFW, 2005). In the study area, ponderosa pine forest is best represented west of the campus area, and consists almost exclusively of ponderosa pines, with only a small component of other conifers and broadleaf trees. The understory is very open. The onsite habitat has been managed for human use and has been used for various educational activities including controlled burn exercises. A disc golf course and outdoor exercise area are also located within the habitat.

Mixed chaparral is a structurally homogeneous brushland type dominated by shrubs with thick, stiff, evergreen leaves. Shrub height and crown cover vary considerably with age since last burn, precipitation regime, aspect, and soil type (CDFW 2005). At maturity, this community typically forms a dense, nearly impenetrable thicket with greater than 80 percent absolute shrub cover. In the study area, the mixed chaparral community is best represented north of College Drive, where the proposed solar field would be located. The community is dominated by greenleaf manzanita, along with some buckbrush and Oregon oaks.

Water features in the study area include drainage ditches originating on the site, a controlled stream diversion that originates offsite and passes through the study area, and a spring/wetland. Some of the drainage ditches flow for only a relatively short distance before dissipating into upland areas. Others are tributary to a larger ditch that directs runoff from the core campus offsite to the west of the study area. The controlled stream diversion is managed by a separate entity. Water is typically released into the diversion channel beginning in late spring and is present into the fall. The spring/wetland feature appears to retain water year-round. This feature supports freshwater emergent wetland vegetation in its deeper portions, and transitions into a riparian scrub wetland on higher lands. During storm events, water discharges to the west, in a shallow ditch that dissipates into an upland area.

Wetlands and other Waters of the State and United States are considered to be sensitive natural communities. Such waters are subject to regulation by State and/or federal governments. Results of the wetland/waters screening evaluation are shown on **Figure 4.4-1**.

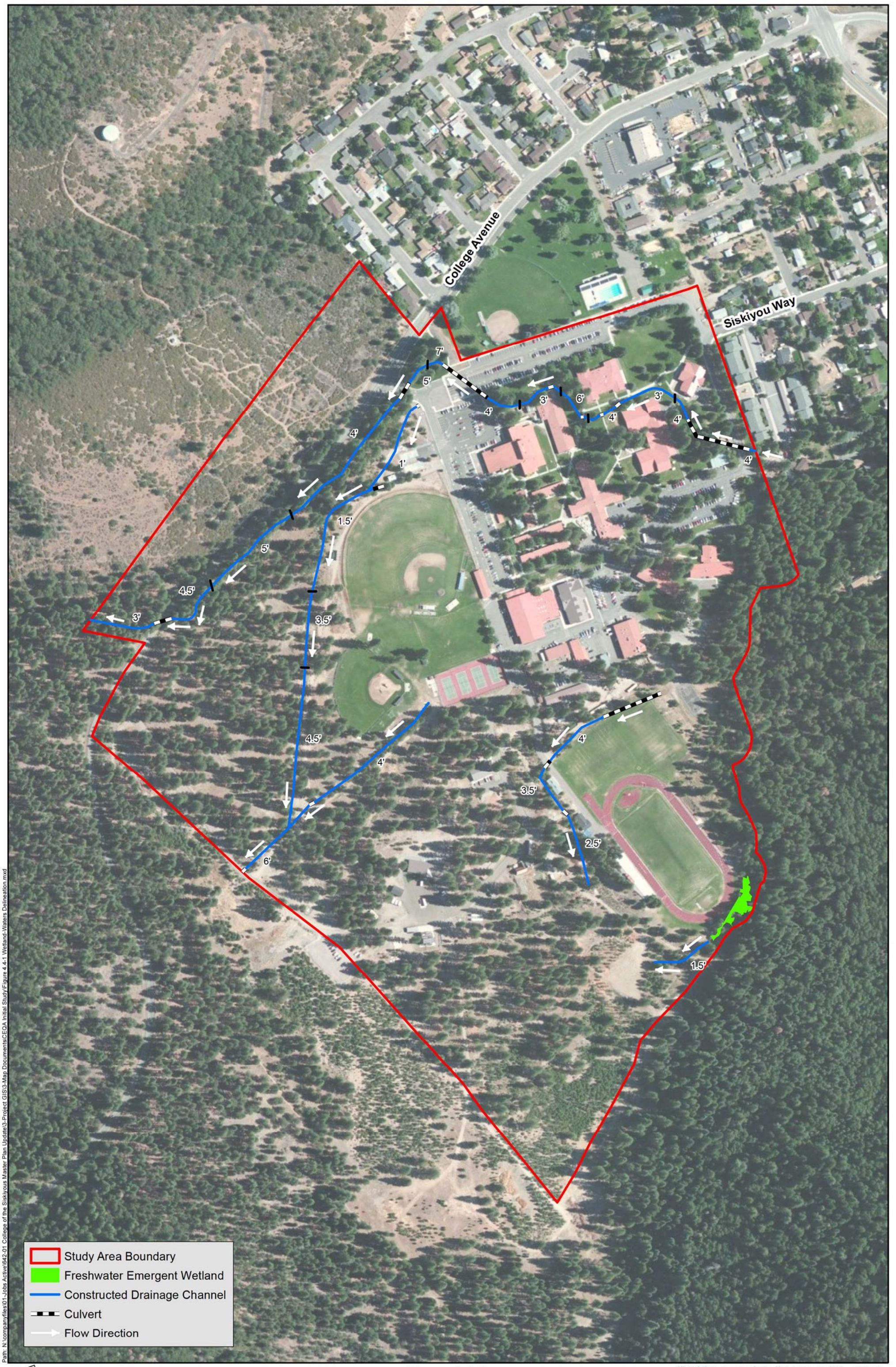
It should be noted that the objective of the screening was to broadly identify potential waters. Under current regulations, none of the on-site waters appear to be subject to federal jurisdiction, and only the spring/wetland feature appears to be subject to State jurisdiction. However, definitions of waters subject to regulation are subject to change, and ongoing regulatory changes are expected throughout the Facility Master Plan implementation period.

Therefore, as noted in **MM 4.4.1**, further review should be conducted if activities are proposed in or near the mapped features or similar features. If regulated waters are present, avoidance, minimization of impacts, or mitigation for the unavoidable loss of waters would be required at the State and/or federal level.

Potential Impacts from Invasive Weeds

The introduction and spread of noxious weeds during construction activities has the potential to adversely affect wetlands and other natural communities. Each noxious weed identified by the California Department of Agriculture receives a rating which reflects the importance of the pest, the likelihood that eradication or control efforts would be successful and the present distribution of the pest within the state. Below is a description of ratings categories that apply to the project area:

> **Category A.** A pest of known economic or environmental detriment that is either not known to be established in California or 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.



All depictions are approximate. Not a survey product. 09.18.20

0 300 Feet

Figure 4.4-1

Potentially Regulated Waters in the Project Study Area

ENPLAN

Category B. A pest of known economic or environmental detriment and, if present in California, it 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.

Nine noxious weed species were observed in the project area during the botanical field surveys:

A-Rated Weeds:	Musk thistle
B-Rated Weeds:	Canadian thistle, dyer's-woad
C-Rated Weeds:	Yellow star-thistle, bull thistle, Scotch broom, Russian-thistle, Klamath weed, puncture vine

Noxious weeds observed in the project area are of widespread distribution in the County, and further spread of these weeds is not anticipated. However, other noxious weeds could be introduced into the project area during construction if unwashed construction vehicles are not properly washed before entering the project site.

Soil import/export and use of certain erosion-control materials such as straw can also result in the spread of noxious weeds. As required by **MM 4.4.2,** 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 4.4.2** reduces potential impacts related to the introduction and spread of noxious weeds to a less-than-significant level.

Compliance with the conditions of resource-agency permits, use of BMPs for spill prevention and erosion control, and implementation of **MM 4.4.1** and **MM 4.4.2** would reduce the project's potential impacts on sensitive natural communities, including wetlands, to a less-than-significant level.

Question D

The study area contains no fish-bearing streams; therefore, the proposed activities would not adversely affect fish movement. With respect to terrestrial wildlife, natural habitats in the study area have a low potential to serve as important nursery sites or wildlife migration corridors. CNDDB mapping (2020) shows that the study area does not contain critical mule deer habitat (i.e., critical summer range, critical winter range, fall holding areas, or fawning grounds). Further, as documented in the City of Weed General Plan Environmental Impact Report (2017), the City is not located within an essential habitat connectivity area. Wildlife movement in the project area is impeded by local barriers such as I-5 east of the project site and urban development north and east of the site, as well as by extensive human activity on the campus, including that associated with the disc golf course and fire training facility.

The project area is located within the Pacific Flyway, and it is possible that resident and migratory birds could nest in or adjacent to the project area. As required by **MM 4.4.3**, the potential for adversely affecting nesting birds can be greatly minimized by removing vegetation and conducting construction activities either before February 1 or after August 31. If construction occurs during the bird nesting season, a nesting survey would be conducted within one week prior to removal of vegetation and/or the start of construction.

If active nests are found in the project area, the City would contact with the CDFW and USFWS to determine what actions are required to comply with the Migratory Bird Treaty Act and California Fish

and Game Code §3503. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists. Therefore, with implementation of **MM 4.4.3**, the proposed project would have a less-than-significant impact on the movement of any migratory fish or wildlife species and would not significantly impact migratory 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. **MM 4.4.1, MM 4.4.2,** and **MM 4.4.3** ensure consistency with the General Plan. Therefore, impacts would be less than significant.

Question F

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

CUMULATIVE IMPACTS

Cumulative projects in the site vicinity, including growth resulting from build-out of the City's and County's General Plans, 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 is addressed in more detail in the Non-Industrial Timber Management Plan (NTMP) and found to be less than significant.

Implementation of BMPs for erosion and sediment control as well as **MM 4.4.1, 4.4.2, and 4.4.3** would further reduce the proposed project's contribution to cumulative regional impacts.

MITIGATION

MM 4.4.1: Project-Specific Review of Regulated Waters.
Prior to implementation of individual projects addressed in the Facilities Master Plan that would occur within 25 feet of the water features shown in **Figure 4.4.1** or similar features, subsequent review shall be undertaken by a qualified wetland specialist or biologist to determine if the proposed individual project may affect regulated waters. If the individual project may affect regulated waters, the College of the Siskiyous shall obtain all necessary permits and comply with the permit conditions, and shall offset the permanent loss of waters at a minimum 1:1 ratio, or as otherwise required in the permits.

MM 4.4.2: Noxious Weeds.
The potential for introduction and spread of noxious weeds shall be avoided/minimized by:

- Using only certified weed-free erosion control materials, mulch, and seed.
- Limiting any import or export of fill material to material that is known to be weed free.
- Requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering the individual project site and immediately upon termination of its use at the individual project site.

MM 4.4.3: Nesting Birds.
In order to avoid impacts to nesting birds protected under the federal Migratory Bird Treaty Act of 1918 or California Fish and Game Code §3503, including their nests and eggs, the following measures shall be implemented:

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

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

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

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

   If active nests are found, the College of the Siskiyous shall consult with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service regarding appropriate action to comply with the Migratory Bird Treaty Act and California Fish and Game Code §3503. Compliance measures may include, but are not limited to, work-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.

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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 as defined in Section 15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

REGULATORY CONTEXT

FEDERAL

Section 106 of the National Historic Preservation Act (NHPA)

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

STATE

California Environmental Quality Act (CEQA)

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

a. The resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR).

b. 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).

c. The lead agency determines that the resource may be a historical resource as defined in PRC §5020.1(j), or §5024.1, or may be significant as supported by substantial evidence in light of the

whole record. Pursuant to PRC §5024.1, a resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

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

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

LOCAL

City of Weed

The City of Weed's General Plan includes the following Goal, Objective, Policy, and Programs related to cultural resources:

Community Development Resource		
Goal	CD 2	A community that celebrated the rich history of Weed
Objective	CD 2.1	Preserve and protect Weed's cultural, historic, and archaeological resources.
Policy	CD 2.1.1	The City shall maintain an inventory of Weed's historic resources.
Programs	CD 2.1.1.1	Identify and register significant cultural and historic resources with the National Register of Historic Place and/or the California Inventory of Historic Resources.
	CD 2.1.1.2	Identify and maintain a list of cultural and historic resources that are unique to Weed.

DISCUSSION OF IMPACTS

Questions A and B

Also see discussion in Section 4.18 (Tribal Cultural Resources)

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

Area of Potential Effects (APE)

The APE was established in consultation with College of the Siskiyous (COS) staff. Project APEs vary depending on the potential impacts of the project and the type of environmental clearance required. The horizontal APE measures approximately 2,500 feet east-to-west by 3,000 feet north-to-south. The vertical APE (i.e., associated with the potential for buried cultural resources or impacts to elevated cultural resources) is based upon the engineering design of the project. According to COS staff, the maximum depth of project excavation would be approximately 15 feet, and the tallest structure would be approximately 44 feet in height. Temporary staging of materials and construction equipment would occur within the APE.

Records Search

The records search included review of records at the Northeast Information Center of the California Historical Resources Information System (NEIC) at California State University, Chico, as well as review of the NRHP, CRHR, California Historical Landmarks, California Inventory of Historic Resources, California Points of Historic Interest, and historical maps.

Research at the NEIC was conducted on January 21, 2020, and covered an approximate half-mile radius around the APE for previously recorded archaeological sites and for previously conducted surveys. The size and scope of the search area was determined to be sufficient based on the results.

The records search revealed that ten archaeological surveys have been previously conducted within a half-mile radius of the APE, two of which were conducted within the APE. There are seven recorded cultural sites within a half-mile radius of the project site; five of those seven sites were identified within the APE during previous surveys for cultural resources. Review of the NRHP, the CRHR, California Historical Landmarks, California Inventory of Historic Resources, California Points of Historical Interest, and historical maps identified no other historic properties within a half-mile radius of the project area.

The Siskiyou County Historical Society was also contacted to obtain additional information regarding cultural resources. No response was received.

Native American Consultation

In response to ENPLAN's request for information, on March 20, 2020, the Native American Heritage Commission (NAHC) conducted a search of its Sacred Lands File; the search did not reveal any known Native American sacred sites or cultural resources in the project area. The NAHC also provided contact information for several Native American representatives and organizations. Comment solicitation letters were sent on March 24, 2020, to Roy Hall, Chairperson of the Shasta Nation; Mark Miyoshi, Tribal Historic Preservation Officer of the Winnemem Wintu Tribe; Caleen Sisk, Chief of the Winnemem Wintu Tribe; and Wade McMaster, Chairperson of the Wintu Tribe of Northern California. No responses were received. Follow-up correspondence via telephone calls and emails was conducted on June 12, 2020. No responses were received.

Field Survey

Archaeological fieldwork took place on February 1, May 6, and May 8, 2020, during which the entire APE was surveyed to identify cultural or historical resources that would be potentially affected by the proposed project. As a result of the surveys, one new historical-era trash scatter and two previously recorded historical-era trash scatters were identified in the APE. Five potentially historic buildings that are proposed for demolition and/or renovation were also identified. No other archaeological or historical resources were identified during the field survey.

Conclusions

As documented in the CRI, one new historical-era trash scatter and two previously recorded historical-era trash scatter were identified in the APE; however, these sites are not eligible for inclusion in the NRHP or the CRHR and no further investigation is warranted.

The project includes demolition of four buildings and partial demolition and renovation of one building as follows:

- McCloud Hall, constructed in 1967 (demolition)
- Bookstore, constructed in 1959 (demolition)
- Eddy Hall, constructed in 1959 (demolition)
- Maintenance Warehouse, constructed in 1973 (demolition)
- Theater Building, constructed in 1969 (partial demolition and renovation)

The CRI concludes that these buildings are unlikely to be eligible for listing in the NRHP or CRHR; however, based on the age of the buildings, additional analysis by an architectural historian is warranted.

MM 4.5.1 requires that prior to modification or demolition of any building or structure that is 50 years of age or greater, evaluation by a qualified architectural historian shall be completed in accordance with the significance criteria for the NRHP and the CRHR. If the architectural historian determines that a building is eligible for listing in the NRHP or the CRHR, appropriate measures recommended by the architectural historian shall be implemented.

Additionally, there is always some potential for previously unknown cultural resources to be encountered during site excavation. **MM 4.5.2** addresses the inadvertent discovery of cultural resources. With implementation of these measures, impacts would be 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 4.5.3** ensures that 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 Section 15064.5(e) of the California Environmental Quality Act (CEQA) Guidelines. Therefore, impacts are less than significant.

CUMULATIVE IMPACTS

Cumulative projects in the vicinity of the project area have the potential to impact cultural resources. Archaeological and historic resources are afforded special legal protections designed to reduce the cumulative effects of development. Cumulative projects and the proposed project are subject to the protection of cultural resources afforded by the CEQA Guidelines Section 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 archaeological or historic resources would be impacted by the proposed project with implementation of **MM 4.5.1, MM 4.5.2**, and **MM 4.5.3**; therefore, the proposed project's cumulative impact on cultural resources is less than significant.

MITIGATION

MM 4.5.1 Prior to modification or demolition of any building or structure that is 50 years of age or greater, evaluation by a qualified architectural historian shall be completed in accordance with the significance criteria set forth in the National Historic Preservation Act and the California Register for Historical Resources. If the architectural historian determines that the subject building(s)/structure(s) is/are potentially eligible for listing in the National Register of Historic Places or the California Register of Historical Resources, appropriate mitigation measures recommended by the architectural historian shall be implemented.

MM 4.5.2 In the event of any inadvertent discovery of cultural resources (i.e., burnt animal bone, midden soils, projectile points or other humanly-modified lithics, historic artifacts, etc.), all work within 50 feet of the find shall be halted until a professional archaeologist can evaluate the significance of the find in accordance with PRC §21083.2(g) and §21084.1, and CEQA Guidelines §15064.5(a). If any find is determined to be significant by the archaeologist, the College of the Siskiyous 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 College prior to resuming construction.

MM 4.5.3 In the event that human remains are encountered during construction activities, the College of the Siskiyous 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 Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed October 2020.

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4.6 ENERGY

Would the Project:

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

REGULATORY CONTEXT

FEDERAL

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

STATE

Renewables Portfolio Standard

In 2002, Senate Bill (SB) 1078 was passed to establish California'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 Renewables Portfolio Standard has been subsequently amended by the following actions:

Date	Legislation/Plan	Action
May 3, 2003	Energy Action Plan I	Accelerated the 20 percent renewable energy target to 2010.
September 21, 2005	Energy Action Plan II	Recommended a goal of 33 percent renewable energy by 2020.
September 26, 2006	SB 107	Codified the 20 percent renewable energy by 2010 target set forth in the Energy Action Plan I.
November 17, 2008	EO S-14-08 (Schwarzenegger)	Required 33 percent renewable energy by 2020 as recommended in the Energy Action Plan II.
September 15, 2009	EO S-21-09 (Schwarzenegger)	Directed California Air Resources Board (CARB) to adopt regulations consistent with the 33 percent renewable energy by 2020 target set forth in EO S-14-08.
April 12, 2011	Senate Bill X1-2	Codified the 33 percent renewable energy by 2020 target set forth in EO S-14-08; this new target applied to all electricity retailers in the state, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators.
October 7, 2015	SB 350	Codified a target of 50 percent renewable energy by 2030. Also requires California utilities to develop integrated resource plans that incorporate a Greenhouse Gas (GHG) emission reduction planning component beginning January 1, 2019.
September 10, 2018	SB 100	Codified targets of 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045.

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.

California Energy Code

The California Energy Code (Part 6 of the CBSC), also known as the State's Energy Efficiency Standards, was established by the California Building Standards Commission in 1976 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. For all newly constructed nonresidential buildings over 10,000 square feet, building commissioning must be included in the design and construction process to verify that the building's energy systems and components meet State requirements for energy efficiency. The Standards are periodically updated by the California Energy Commission (CEC).

The 2019 update to the Energy Efficiency Standards became effective on January 1, 2020. An Initial Study was completed for the 2019 Energy Efficiency Standards, which are currently in effect, and estimated that implementation of the 2019 Standards will reduce the energy use of typical new residential buildings by about 7 percent and nonresidential buildings by about 31 percent compared to buildings constructed under the current standards.

In addition, the 2019 Standards are projected to decrease water consumption of approximately 246 million gallons per year, reduce statewide annual electricity consumption by about 650 gigawatt-hours per year, and reduce statewide natural gas consumption by 9.8 million therms per year. In addition, there will be a net reduction in the emissions of nitrous oxide by roughly 100 metric tons per year, sulfur oxides by 0.27 metric tons per year, carbon monoxide by 28 metric tons per year, and particulate matter less than 2.5 micrometers in diameter (PM 2.5) by 3.36 metric tons per year. The Standards are also anticipated to reduce growth in statewide GHG emissions by 230,000 metric tons of carbon dioxide (CO_2e) per year.

California Green Building Standards Code

In 2007, the California Building Standards Commission (CBSC) developed green building standards in an effort to meet the goals established by the Global Warming Solutions Act of 2006. These standards are referred to as the CALGreen Code and are included as Part 11 of the CBSC.

The 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. The most recent update to the CALGreen Code went into effect January 1, 2020. 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.

California Environmental Quality Act (CEQA)

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

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

LOCAL

City of Weed

The City's General Plan includes the following Goal, Objectives, Policies, and Program related to energy.

Conservation Element		
Goal	CO 7	An energy efficient and energy independent community.
Objectives	CO 7.1	Increase energy efficiency within Weed's buildings.
	CO 7.2	Expand opportunities to harness renewable energy.
Policies	CO 7.1.1	The City shall retrofit all municipal facilities to LEED Silver green building certification for existing buildings (LEED-EB).
	CO 7.1.2	Promote residential and commercial energy efficiency rebate programs and subsidies for energy efficient appliances in homes and businesses.
	CO 7.1.3	The City shall coordinate with educational institutions and local non-profit groups to provide public education on energy conservation.
	CO 7.2.1	The City shall identify areas with high potential for renewable energy generation.
Program	CO 7.2.1.2	Streamline the permitting process and minimize permitting fees for solar panels, wind farm, and other sources of renewable energy.

DISCUSSION OF IMPACTS

Question A

Also see discussion in Section 4.8 (Greenhouse Gas Emissions).

Construction-Related Energy Use

Energy consumption during construction would occur from diesel and gasoline used for construction equipment, haul trucks, and construction workers travelling to and from the work site. In addition, electrical power would be used during certain phases of development. The use of electricity during construction would be minimal and would not be considered wasteful, inefficient, or unnecessary.

Construction equipment must comply with State regulations that require the use of fuel-efficient equipment. Given these existing State regulations that require the use of fuel-efficient equipment, impacts during construction would be less than significant. Nonetheless, it should be noted that implementation of **Mitigation Measure 4.3.1 (h)**, which restricts idling of construction equipment when not in use, would further reduce energy use during construction.

Operational Energy Use

According to the 2017 Facility Master Plan, heating for the buildings is supplied by 11 propane-fired hydronic boilers. The main propane tanks are located in the southwestern area of the campus, ±150 feet east of the existing training tower. Electrical heat is used in several of the older buildings that are scheduled for demolition. Groundwater is pumped from four wells on the campus and is used to geo-

thermally cool the campus buildings. The cool water circulates through the buildings and is then discharged to the campus irrigation system and used as irrigation water. This system reduces energy use associated with air conditioning systems. College of the Siskiyous (COS) also has an emergency diesel generator that is capable of powering the majority of the campus.

As stated in Section 4.3 (Air Quality) under Questions A and B, project emissions were estimated using CalEEMod. CalEEMod estimates electricity use at 719,940 kilowatt hours per year (kWh/yr) for new development under the Facility Master Plan. This does not take into consideration use of propane to heat certain buildings or use of groundwater to geothermally cool the buildings. Further, it is conservatively estimated that the proposed solar PV system would generate 50 percent of the energy required for the newly constructed buildings. In addition, the buildings proposed for demolition (a total of over 29,000 square feet) were constructed prior to adoption of the State's Energy Efficiency Standards in 1976 and prior to adoption of the CALGreen Code in 2007. All new buildings must comply with the State's Energy Code and CALGreen Code, which were established to reduce the State's energy consumption and provide energy efficiency for residential and nonresidential buildings; thus, replacement of the old buildings would result in an increase in energy efficiency. Further, the project does not include any energy-intensive stationary sources.

As stated in Section 4.3, the project includes construction of on-campus housing that would accommodate up to 396 students, thereby reducing vehicle travel and operational emissions associated with energy for transportation. The campus also includes on-campus pedestrian and bicycle amenities as well as a public transit stop on the campus to reduce reliance on automobiles.

In addition, it is estimated that the State's 2016 Mobile Source Strategy will result in a state-wide reduction in GHG emissions of 45 percent, and a 50 percent reduction in the consumption of petroleum-based fuels in the transportation sector. Further, the State's RPS program was enacted to increase the amount of electricity generated and sold to retail customers from eligible renewable energy resources. The RPS, as amended, establishes a target of 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045.

Therefore, the project's operational energy-related impacts would be less than significant because the proposed project does not include any energy-intensive stationary sources or operational activities that would result in wasteful, inefficient, or unnecessary consumption of energy resources. A solar array would be installed to offset energy use, and on-campus student housing and options for multi-model transportation (i.e., pedestrian, bicycles, public transit) would reduce vehicle travel and associated energy for transportation. Construction documents would be reviewed by the Division of the State Architect (DSA) to ensure that all State mandatory energy efficiency measures are implemented.

Question B

As stated under Question A, the DSA would review all building construction plans to ensure that applicable State energy efficiency measures are incorporated into the project design.

In addition to energy efficiency standards for building envelopes, mechanical systems, lighting, and electrical power distribution, newly constructed nonresidential buildings must have an allocated solar zone that identifies a suitable location for installation of photovoltaic (PV) solar panels at a future date. Alternatively, a solar hot water (SHW) system may be permanently installed on the buildings. Construction documents must depict a plan for connecting a PV or SHW system to the electrical or plumbing system of a building. The proposed project also includes installation of a solar field on COS property when funding becomes available.

Compliance with State energy efficiency measures and installation of a solar field to off-set energy use would ensure that the proposed project does not conflict with or obstruct a State or local plan for renewable energy or energy efficiency; there would be no impact.

CUMULATIVE IMPACTS

Completion of the proposed project and other potential cumulative projects in the region, including growth resulting from build-out of the City's General Plan, could result in potentially significant impacts due to the wasteful, inefficient, or unnecessary consumption of energy resources. However, as stated under Regulatory Context, all new development projects in the State are required to comply with the State's Energy Efficiency Standards (CALGreen Code). These regulations are intended to reduce the potential for cumulative impacts related to energy use and GHG emissions. The Initial Study prepared for the 2019 Energy Efficiency Standards estimates that implementation of the 2019 Standards will reduce statewide annual electricity consumption by about 653 gigawatt-hours per year, and natural gas consumption by 9.8 million therms per year.

Because all new development projects in the City will comply with the State's energy efficiency standards, the proposed project's cumulative impacts on energy resources would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

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California Energy Commission. 2018. 2019 Nonresidential Compliance Manual for the 2019 Building Energy Efficiency Standards. https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency-1. Accessed August 2020.

_____. 2018. Initial Study/Proposed Negative Declaration for the 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings. https://www.energy.ca.gov/title24/2019standards/rulemaking/documents/. Accessed January 2020.

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

STATE

California Alquist-Priolo Earthquake Fault Zoning Act

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

intended for human occupancy on the surface trace of active faults. Before a project can be permitted in a designated Alquist-Priolo Fault Study Zone, a geologic investigation must be prepared to demonstrate that proposed buildings would not be constructed across active faults.

California Seismic Hazards Mapping Act

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

California Building Standards Code

As discussed in Section 4.6, the California Building Standards Code (CBSC) consists of 13 parts, including the California Building Code, Energy Code, Fire Code, and Green Building Standards Code. Part 2 of the CBSC is the California Building Code (CBC) that includes standards for structural design, excavation, grading, seismic design, drainage, and erosion control. In the case of structures proposed by the District, the DSA is responsible for ensuring compliance with the California Building Code and CALGreen Code.

LOCAL

City of Weed

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

Safety Element		
Goals	SF 2	A risk aware community prepared for natural disaster and emergencies.
	SF 3	A community protected from natural and manmade hazards.
Objectives	SF 2.1	Improve community-wide awareness and preparedness of potential natural and human caused emergencies.
	SF 3.1	Protect residents and property located within the city limits from naturally or human caused hazards.
	SF 3.4	Reduce the risk of loss of life, personal injury, and damage to property resulting from seismic hazards.
Policies	SF 3.1.1	Continue to enforce the California Building Code (CBC) for all new construction and renovation and when occupancy or use changes occur.
	SF 3.2.3	Enforce measures to minimize soil erosion and volume and velocity of surface runoff both during and after construction through application of the erosion control guidelines.
	SF 3.4.1	Require structural integrity of existing buildings to reasonably protect occupants from earthquakes.
Programs	SF 2.1.1.1	Coordinate the procedures of the Weed Volunteer Fire Department and the Weed Police Department. When an update is required, coordinate with Siskiyou County and the Disaster and Emergency Preparedness Plan.

	SF 3.2.3.1	Require future projects to calculate the change in storm runoff due to new development, and mitigate significant impacts.
	SF 3.2.3.2	Require that best practices for erosion during construction be followed for all construction projects.
	SF 3.4.1.1	Monitor and review existing critical, high priority buildings and retrofit if necessary to ensure structural compliance with seismic safety standards.
	SF 3.4.2.1	Require a geotechnical report for development where landslides, steep slopes, and soil conditions are a potential hazard.

DISCUSSION OF IMPACTS

Question A

i and ii)

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

One of the DSA's primary roles is ensuring the structural safety of public schools through review for compliance with the Field Act. The Field Act establishes stringent requirements for public schools to ensure that school facilities can withstand earthquakes and other hazards.

Under the Field Act, licensed design professionals must prepare improvement and construction plans, and all plans must be verified by Division of the State Architect (DSA) to ensure compliance with applicable building codes. College of the Siskiyous (COS) must hire a DSA-certified inspector to oversee construction.

At the conclusion of construction, the design professionals, the inspector, and the contractor must file verified reports with DSA indicating the work has been performed in compliance with the approved plans and specifications. Compliance with existing building code standards and DSA inspection procedures ensures that impacts are less than significant.

iii)

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

According to the Geologic Map of California (CDC, 2020), geology of the project site is described as tertiary volcanic flow rocks with minor pyroclastic deposits, and there is a low risk for liquefaction to occur.

In accordance with DSA requirements, a geotechnical investigation/soils report must be submitted with the construction documents for new construction. The geotechnical report must evaluate potential geologic and seismic hazards, including slope instability, liquefaction, total and differential settlement, and surface displacement due to faulting or seismically induced lateral spreading or lateral flow. The geotechnical report must include recommendations for foundation type and depths, structural systems, ground stabilization, and/or other measures applicable to

soils and geological conditions in the project site. Implementation of recommendations in the geotechnical/soils report will ensure that potential impacts associated with seismic-related ground failure are less than significant.

A geotechnical engineer or qualified representative must monitor construction activities as recommended in the geotechnical report and must submit a verified report to DSA following construction to document that all recommendations in the geotechnical report have been implemented.

iv)

The project site is relatively flat, and no development is proposed on steep slopes. In the event that earthwork alters the shape of a slope or imposes new loads on an existing slope, the geotechnical report would include recommendations for engineered slopes and/or retaining walls to minimize/avoid potential risks associated with landslides. Therefore, impacts would be less than significant.

Question B

Construction of the proposed project would involve excavation, grading activities, and installation of project components, which would result in the temporary disturbance of soil and could generate localized erosion and/or loss of topsoil. 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.

In accordance with DSA requirements, improvement plans must include an erosion control plan that identifies Best Management Practices (BMPs) that would be implemented throughout construction. The DSA-approved inspector would be responsible for verifying that erosion control measures are implemented in accordance with the approved plans. 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 above. Unstable soils consist of loose or soft deposits of sands, silts, and clays. In addition, some soils have a potential to swell when they absorb water and shrink when they dry out. These expansive soils generally contain clays that expand when moisture is absorbed into the crystal structure. When these soils swell, the change in volume can exert significant pressure on loads that are upon them, such as buildings or underground utilities. The required geotechnical investigation/soils report would include site-specific engineering design measures and construction methods to ensure that impacts associated with unstable soils or expansive soils (if present) are less than significant.

Question E

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

Question F

Paleontology refers to the study of prehistoric life forms, other than humans. Paleontological resources include fossils and the deposits that contain fossils. Fossils are evidence of ancient life preserved in sediments and rock, such as the remains of animals, animal tracks, plants, and other organisms; as such, they are a non-renewable resource.

Paleontological resources and fossils are found primarily in sedimentary rock deposits. According to the California Geological Survey (CGS), rock formations on the project site are Tertiary-age volcanic flow rocks with minor pyroclastic deposits (mostly flows, breccia, and tuff, including greenstone, diabase, and pillow lavas). Because volcanic rocks were generated from volcanic eruptions and were formed under high temperature and pressure conditions, the project site has an extremely low

potential to harbor fossils. In addition, the project area has no unique geological features, and according to the U.C. Berkeley Museum of Paleontology, no fossils have been reported in the project area. Therefore, there would be no impact.

CUMULATIVE IMPACTS

Completion of the proposed project and other potential cumulative projects in the region, including growth resulting from build-out of the City's General Plan, could result in increased erosion and soil hazards and could expose additional structures and people to seismic hazards. However, these impacts can be fully mitigated with implementation of construction-related erosion control programs and with the incorporation of standard seismic safety and engineering design measures; therefore, cumulative impacts are less than significant.

MITIGATION

None necessary.

DOCUMENTATION

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4.8 GREENHOUSE GAS EMISSIONS

Would the project:

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

REGULATORY CONTEXT

FEDERAL

U.S. Environmental Protection Agency

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

STATE

Assembly Bill 32 (Global Warming Solutions Act of 2006)

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

California Building Standards Code

The California Building Standards Code (CBSC) consists of 13 parts, including the California Building Code, Energy Code, and Green Building Standards Code.

California Energy Code

As stated in Section 4.6 under Regulatory Context, the California Energy Code (Part 6 of the CBSC), also known as the State's Energy Efficiency Standards, was established in 1976 with a goal of reducing California's energy consumption for residential and nonresidential buildings. The 2019 Standards are expected to reduce growth in statewide GHG emissions by 230,000 metric tons of carbon dioxide (CO_2e) per year.

California Green Building Standards Code

In 2007, the California Building Standards Commission (CBSC) developed green building standards in an effort to meet the goals established by the Global Warming Solutions Act of 2006. These standards are referred to as the CALGreen Code and are included as Part 11 of the CBSC. The most recent update to the CALGreen Code went into effect on January 1, 2020.

New residential and nonresidential buildings must comply with mandatory measures related to planning and design (e.g., install secure bicycle parking facilities, designated parking for clean air vehicles, improvements to facilitate the future installation of electric vehicle supply equipment, light pollution reduction, etc.), energy efficiency, water efficiency/conservation (e.g., water efficient landscaping, low-flow plumbing fixtures, etc.), material conservation/resource efficiency (weather protection, construction waste reduction/recycling, recycling facilities for building occupants, building commissioning, systems testing, etc.).

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

Under SB 375, the California Air Resources Board (CARB) sets regional targets for the reduction of GHG emissions from passenger vehicles and light duty trucks through an integrated approach to regional transportation and land use planning. SB 375 requires a Sustainable Communities Strategy (SCS) to be included in the applicable Regional Transportation Plan (RTP) that demonstrates how the region will meet the GHG emissions reduction targets. The purpose of the SCS is to coordinate transportation and land use planning in order to reduce vehicle miles traveled (VMT) and associated GHG emissions from vehicles and light trucks.

Senate Bill 391

SB 391, enacted in 2009, requires the California Transportation Plan to support an 80 percent reduction in GHG emissions below 1990 levels by 2050.

Assembly Bill 1504 (2010)

AB 1504, enacted in 2010, requires the California Board of Forestry and Fire Protection to ensure that its rules and regulations that govern timber harvesting consider the capacity of forest resources to sequester carbon dioxide emissions sufficient to meet or exceed a sequestration target of 5 million metric tons of carbon dioxide annually, as established in the 2006 Climate Change Scoping Plan.

Senate Bill 32/Assembly Bill 197

These two bills were signed into legislation on September 8, 2016. 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. AB 197 also provides more legislative oversight of CARB.

Mobile Source Strategy

CARB's Mobile Source Strategy, adopted in 2016, describes the State's strategy for containing air pollutant emissions from vehicles, and quantifies growth in vehicle miles traveled that is compatible with achieving state climate targets. The Strategy demonstrates how the State can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risks from transportation emissions, and reduce petroleum consumption over the next fifteen years.

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

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

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

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

Short-Lived Climate Pollutant Reduction Strategy

As required by SB 605 (2014), CARB prepared a Short-Lived Climate Pollutant (SLCP) Reduction Strategy in 2017. SLCPs are powerful climate forcers that have relatively short atmospheric lifetimes and include methane, hydrofluorocarbons, and anthropogenic black carbon. The goal of the Strategy is to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills.

California Executive Order B-48-18

Executive Order (EO) B-48-18 was issued by the Governor in January 2018, and set targets of 200 hydrogen fueling stations and 250,000 electric vehicle chargers to support 1.5 million zero-emission vehicles (ZEVs) on California roads by 2025, and 5 million ZEVs by 2030. The State's ZEV Action Plan outlines specific actions that state agencies will take to continue advancing the ZEV market in California.

Renewables Portfolio Standard

As discussed in Section 4.6 (Energy), the State's Renewables Portfolio Standard (RPS) Program was enacted to increase the amount of electricity generated and sold to retail customers from eligible renewable energy resources. The RPS was most recently amended in September 2018 by SB 100 to establish a target of 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045.

California Executive Order B-55-18

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

CEQA Guidelines

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

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

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

In *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204, which involved the Newhall Ranch project, the California Supreme Court concluded that a legally appropriate approach to assessing the significance of GHG emissions was to determine whether a project was consistent with "*'performance based standards' adopted to fulfill 'a statewide . . . plan for the reduction or mitigation of greenhouse gas emissions' (CEQA Guidelines § 15064.4(a)(2), (b)(3); 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)	Carbon dioxide (CO_2) is the primary greenhouse gas emitted through human activities. In 2014, CO_2 accounted for about 80.9 percent of all U.S. greenhouse gas emissions from human activities. The main human activity that emits CO_2 is the combustion of fossil fuels (coal, natural gas, and oil) for energy and transportation, although certain industrial processes and land-use changes also emit CO_2.
Methane (CH_4)	Methane (CH_4) is the second most prevalent greenhouse gas emitted in the United States from human activities. Methane is emitted by natural sources such as wetlands, as well as human activities such as the raising of livestock; the production, refinement, transportation and storage of natural gas; methane in landfills as waste decomposes; and in the treatment of wastewater.
Nitrous oxide (N_2O)	In 2014, nitrous oxide (N_2O) accounted for about 6 percent of all U.S. greenhouse gas emissions from human activities. Nitrous oxide is naturally present in the atmosphere as part of the Earth's nitrogen cycle. Human activities such as agricultural soil management (adding nitrogen to soil through use of synthetic fertilizers), fossil fuel combustion, wastewater management, and industrial processes are also increasing the amount of N_2O in the atmosphere.
Hydrofluorocarbons (HFCs)	Hydrofluorocarbons (HFCs) are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products such as refrigerants, aerosol propellants, solvents, and fire retardants. They are released into the atmosphere through leaks, servicing, and disposal of equipment in which they are used.
Perfluorocarbons (PFCs)	Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F_4). Perfluorocarbons are produced as a byproduct of various industrial processes associated with aluminum production and the manufacturing of semiconductors.

Greenhouse Gas	Description
Sulfur hexafluoride (SF_6)	Sulfur hexafluoride (SF_6) is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used in magnesium processing and as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF_6 produced worldwide.
Nitrogen trifluoride (NF_3)	Nitrogen trifluoride is a colorless, odorless, nonflammable gas that is highly toxic by inhalation. It is one of several gases used in the manufacture of liquid crystal flat-panel displays, thin-film photovoltaic cells and microcircuits.

LOCAL

The City of Weed's General Plan includes the following Goals, Objectives, Policies, and Programs related to GHGs and Climate Change.

Circulation Element		
Goals	CI 1	A safe and complete transportation network that is accessible to all users.
	CI 3	Strong local and regional connectivity.
	CI 4	A community with low auto-dependency.
Objectives	CI 1.1	Establish a well-designed complete street network to accommodate multiple modes of transportation.
	CI 1.2	Achieve a 30 percent share of pedestrian travel by 2040.
	CI 1.3	Achieve a 10 percent share of bicycle travel by 2040.
	CI 1.4	Increase convenience and access to public transportation in Weed.
	CI 3.1	Strengthen multimodal connectivity between North and South Weed.
	CI 3.4	Integrate transportation and land use planning efforts.
	CI 4.1	Reduce the number of single-occupant vehicle trips in the City by 25 percent by 2040.
	CI 4.2	Reduce vehicle miles traveled in Weed to meet GHG reduction targets mandated by AB 32.
Policies	CI 1.1.1	Implement Complete Streets policy that is consistent with the California Complete Streets Act (AB 1358).
	CI 1.1.2	New development must locate parking behind the building when feasible to promote a walkable streetscape.
	CI 1.1.3	New development and major roadway projects must incorporate provisions for non-drivers.
	CI 1.2.1	Establish a safe and complete pedestrian network.
	CI 1.3.1	Establish a safe and complete bicycle transportation network.

	CI 1.3.2	All bikeways must meet or exceed the design standards set forth in the California Highway Design Manual.
	CI 1.3.3	Provide accessible bicycle parking facilities.
	CI 1.4.1	Coordinate with Siskiyou Transit and General Express (STAGE) to ensure that residents of Weed have adequate access to public transportation.
	CI 1.4.2	Enhance intermodal connectivity between transit and other modes of transportation.
	CI 3.1.1	Identify alternative pathways to enhance access between North and South Weed.
	CI 3.4.1	Provide adequate transportation infrastructure and facilities to support new land uses and development.
	CI 3.4.2	Maintain consistency with local, regional, and state planning documents.
	CI 3.4.3	Maintain consistency with College of the Siskiyous Campus Master Plan.
	CI 4.2.1	New developers must include provisions for non-motorized modes of transportation.
Programs	CI 1.1.1.1	Prioritize complete streets improvements along Weed's collector roads.
	CI 1.1.1.2	Adopt a Bicycle and Pedestrian Master Plan that further identifies specific needs and priorities for alternative transportation in Weed.
	CI 1.1.1.3	Establish educational programs and events that encourage the use of active transportation.
	CI 1.2.1.1	Adopt standards for safe pedestrian crossings and road segments that are consistent with traffic control devices in the Manual for Uniform Traffic Control Devices (MUTCD).
	CI 1.2.1.2	Implement traffic calming techniques to reduce vehicle speeds along corridors with high traffic speeds and volumes.
	CI 1.2.1.3	Adopt a Safe Routes to School program that incorporates pedestrian safety measures near Weed Elementary School, Weed High School, and College of the Siskiyous.
	CI 1.2.1.4	Require new developments to provide adequate pedestrian access within and surrounding the property.
	CI 1.2.1.5	Prioritize sidewalk repair and installation in areas with high residential and commercial activity.
	CI 1.3.1.1	Adopt and implement a Bicycle Master Plan.
	CI 1.3.1.2	Prioritize investment in separated (Class I and II) bicycle facilities along commercial corridors and in areas with unsafe conditions such as high truck traffic and vehicle speeds.
	CI 1.3.1.3	Implement shared roadway facilities such as "sharrows" along local and residential roads with slow traffic speeds.
	CI 1.3.1.4	Adopt a Safe Routes to School program that incorporates bicycle safety measures near Weed Elementary School, Weed High School, and College of the Siskiyous.
	CI 1.3.1.5	Implement signage that designates bicycle routes and indicates cyclists' presence to drivers.

	CI 1.4.1.3	Promote the incorporation of bus shelters and benches to make public transit a more attractive and comfortable mode of transportation.
	CI 1.4.2.1	Prioritize investment in sidewalks near transit stops.
	CI 4.1.1.1	Implement carpooling and ridesharing programs.

Conservation Element		
Goals	CO 7	An energy efficient and energy independent community.
Objectives	CO 7.2	Expand opportunities to harness renewable energy.

Air Quality Element		
Goals	AQ 1	Clean air for residents and visitors
Objectives	AQ 1.2	Reduce emissions from transportation related activities.
Policies	AQ 1.2.1	The City shall meet California State greenhouse gas emission reduction goals as established by AB 32 and SB 375.
	AQ 1.2.2	The City shall establish transportation demand management programs in collaboration with Siskiyou Regional Transportation Authority to reduce vehicle miles traveled.
	AQ 1.2.5	The City shall promote the use of low-emission vehicles, such as electric-powered, hydrogen-powered, or hybrid.
Programs	AQ 1.2.2.1	The City shall establish transportation demand management programs in collaboration with Siskiyou Regional Transportation Authority to reduce vehicle miles traveled.
	AQ 1.2.2.2	Promote carpooling and ridesharing programs to reduce dependence on single-occupant vehicles.
	AQ 1.2.4.1	Promote the use of zero-emission vehicles, such as electric-powered, hydrogen-powered or hybrid.

DISCUSSION OF IMPACTS

Question A

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

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

Gases with a higher GWP absorb more heat than gases with a lower GWP, and thus have a greater effect on global warming and climate change. The GWP metric is used to convert all GHGs into CO_2 equivalent (CO_2e) units, which allows policy makers to compare impacts of GHG emissions on an equal basis. The GWPs and atmospheric lifetimes for each GHG are shown in **Table 4.8-2**.

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

GHG	GWP (100-year time horizon)	Atmospheric Lifetime (years)
CO_2	1	50 -200
CH_4	25	12
N_2O	298	114
HFCs	Up to 14,800	Up to 270
PFCs:	7,390-12,200	2,600 – 50,000
SF_6	22,800	3,200
NF_3	17,200	740

Source: *U.S. Environmental Protection Agency, 2018.*

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. Pursuant to §15064.4(b)(2) of the CEQA Guidelines, lead agencies may use thresholds on a case-by-case basis. Further, CEQA Guidelines §15064.7(c) allows lead agencies to look to thresholds previously adopted or recommended by other public agencies or recommended by experts.

For a qualitative/performance-based threshold, a lead agency could determine a less-than-significant impact if a project complies with State, regional, and/or local programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

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

Neither the City of Weed nor Siskiyou County Air Pollution Control District (SCAPCD) have adopted numerical thresholds of significance for GHG emissions. However, as documented in the EIR for the City's 2040 General Plan, implementation of the applicable goals, objectives, policies, and programs included in the 2040 General Plan would reduce the community's annual per capital GHG emissions (based on 2014 emissions inventory) from 13.5 MT CO2e to 5 MT CO2e, which is consistent with CARB's statewide per capita target of no more than 6 MT CO2e per capita by 2030 (CARB, 2017). These policies and programs are identified under Regulatory Context above.

As indicated, the City's General Plan focuses on measures that would reduce emissions from the transportation sector (e.g., supporting mixed-use neighborhoods and a multi-modal transportation system) and measures that reduce energy use and increase energy efficiency.

As shown in **Table 4.8-3**, the majority of the project's GHG emissions are attributed to mobile sources (e.g., vehicle trips for employees, students, vendors, deliveries, etc.), and energy use due to the generation of electricity for the project through the combustion of fossil fuels; therefore, in the absence of numerical thresholds, College of the Siskiyous (COS) has determined that it is appropriate to evaluate the project's GHG emissions qualitatively in accordance with CEQA Guidelines §15064.4(b)(2) by determining whether the project is consistent with the General Plan's goals, objectives, policies, and programs that were adopted to reduce GHG emissions.

Project GHG Emissions

GHG emissions resulting from construction and operation of the proposed project were estimated using the CalEEMod.2016.3.1 software. CalEEMod is a statewide model designed to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

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 PacifiCorp's mix of renewable and non-renewable energy sources to estimate indirect GHG emissions associated with electricity use.

Site-specific inputs and assumptions include, but are not limited to, the following. Output files, including all site-specific inputs and assumptions, are provided in **Appendix A**.

- Although construction of project components is based on the availability of funding, to represent a worst-case scenario, the CalEEMod analysis was based on all project components being constructed concurrently.
- Emissions from construction are based on all construction-related activities associated with proposed and future uses, including but not limited to grading, use of construction equipment, material hauling, trenching, and site preparation.
- Operational emissions are based on operational activities at build-out of the proposed Master Plan, including vehicle traffic, electricity usage in the buildings and for outdoor lighting, water use, wastewater treatment, solid waste disposal, use of architectural coatings, etc. Because some existing buildings will be demolished, only the net increase in building square footage is evaluated for operational emissions.
- According to COS projections, the on-campus student population is anticipated to increase by about 105 students at build-out of the Master Plan; staffing levels are anticipated to increase by 15. The net increase in average daily trips was adjusted accordingly.
- Proposed on-campus housing would accommodate up to 396 students, resulting in a decrease in VMT.
- It is conservatively estimated that the solar photovoltaic PV system would generate 50 percent of the energy required for the newly constructed buildings.
- It is estimated that implementation of the project will result in the removal of ten acres of vegetation on the COS campus.

Estimated GHG emissions for the proposed project are shown in **Table 4.8-3.** As indicated, construction emissions and emissions associated with the loss in sequestration potential from removal of vegetation on ten acres are amortized over the life of the project, defined as 30 years, and added to the operational emissions. The majority of operational emissions are attributed to mobile sources and energy use.

As noted above, the CalEEMod analysis is designed to address land use projects. As further discussed below, a separate GHG analysis was completed to address the effects of Timber Harvest Plan implementation and timberland conversion.

TABLE 4.8-3
Estimated Annual Greenhouse Gas Emissions (Metric Tons)

Source	Carbon Dioxide (CO_2)	Methane (CH_4)	Nitrous Oxide (N_2O)	Carbon Dioxide Equivalent (CO_2e)
Area	1.51	0.001	0	1.55
Energy	678.08	0.01	0.004	679.72
Mobile	955.83	0.07	0	957.53
Waste	36.96	2.18	0	91.57
Water	40.38	0.30	0.007	50.06
Construction (Amortized over 30 years)	26.56	0.005	0	26.68
Vegetation Removal (amortized over 30 years)	37	0	0	37
Total	1,776.32	2.57	0.01	1,844.11

Source: CalEEMod, 2020. Note: Total values may not add due to rounding (see Appendix A).

Consistency Analysis

The City's General Plan identifies COS as being within the Bel Air Key Growth Area. The General Plan states that Bel Air is a neighborhood that primarily caters to the college community and includes retail, arts, and recreational uses. The key outcomes of this key growth area include mixed-use development along College Avenue, expansion of low-density housing north of Sullivan Road, new apartments adjacent to COS, and additional public facilities. Additional future mixed-uses along College Avenue would provide accessible retail development to college students and faculty, with expanded access to healthy food and entertainment activities.

The General Plan states that medium-density housing is proposed in the area of College Avenue that can accommodate the City's population growth as well as growth of the COS community. To accommodate growth in the college population, the General Plan proposes high-density residential development for student housing adjacent to existing apartments east of the COS campus.

In terms of circulation, Bel Air is characterized by strong multimodal connectivity and accessibility. Bike lanes along College Avenue and South Weed Boulevard are proposed to enhance safety and enable students to bike as a viable form of transportation. Expansion of sidewalks throughout Bel Air would also improve pedestrian safety and enhance access to public transit services.

Mixed-use development along College Avenue would reduce the need for area residents to drive, thereby reducing automobile emissions. This scenario also encourages uses that can provide jobs, and potentially reduce emissions from work travel.

The General Plan further states that increased infrastructure for alternative energy vehicles, such as electric or hydrogen-powered vehicles can promote low-emission vehicle usage in the City. The General Plan also calls for increasing green energy production in the City to reduce

dependence on fossil fuels and take advantage of associated cost savings from local power generation.

The proposed Master Plan is consistent with the applicable goals, objectives, policies, and programs identified under Regulatory Context because:

- The project includes construction of on-campus housing that would accommodate up to 396 students, thereby reducing VMT and operational emissions associated with mobile sources. This is also consistent with the City's plan for higher-density residential uses in the area to accommodate COS students.
- The existing on-campus pedestrian walkway system would be extended as needed to provide safe access to newly constructed buildings.
- Pedestrian walkways from College Avenue onto the COS campus would continue to be maintained.
- COS will continue to work with the Siskiyou County Local Transportation Commission to coordinate the Regional Transportation Planning Agency's (RTPA's) funding of a "free fare program" for public transit services for COS students.
- COS will continue to coordinate the Cooperative Agencies Resources for Education (CARE) and Extended Opportunity Programs and Services (EOPS) programs, which provide bus passes to disadvantaged students.
- COS will install bicycle parking in conjunction with new construction to promote the use of bicycles as an alternative means of transportation in accordance with CALGreen requirements.
- Buildings proposed for demolition were constructed prior to adoption of the State's Energy Efficiency Standards and Green Building Code; new buildings would be constructed in accordance with current building standards and, thus, would result in a net decrease in energy and water use.
- COS will install infrastructure to facilitate future installation of electric vehicle supply equipment in accordance with CALGreen requirements.
- Solar panels and appurtenant equipment would be installed on COS property to reduce the use of electricity.

In addition, as discussed under Regulatory Context, the State has adopted numerous policies that call for the development of additional State regulations to reduce GHG emissions to achieve the 2030 target of 40 percent emissions reductions below 1990 levels.

It is estimated that the State's 2016 Mobile Source Strategy will result in a state-wide reduction in GHG emissions of 45 percent, and a 50 percent reduction in the consumption of petroleum-based fuels in the transportation sector.

The State's RPS program was enacted to increase the amount of electricity generated and sold to retail customers from eligible renewable energy resources. The RPS, as amended, establishes a target of 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045. Electricity for the proposed project would be provided by PacifiCorp, a company based in Portland, Oregon, that provides electric service to certain areas in California, Oregon, Washington, Utah, Wyoming, and Idaho. According to PacifiCorp's 2019 Integrated Resource Plan (IRP), the 2019 IRP includes programs to facilitate the addition of over 6,400 MW of new renewable resources by the end of 2023, with nearly 11,000 MW of new renewable resources over the 20-year planning period through 2038. As detailed in the 2019 IRP, PacifiCorp must comply with State RPS requirements for California, Oregon, Washington, and Utah. PacifiCorp's 2019 IRP demonstrates that by 2030, PacifiCorp will have reduced GHG emissions by nearly 60 percent from 2005 levels. Emissions

reductions would be achieved by adding renewable energy sources, leveraging new technology, and continuing to phase out coal-fueled generation plants.

Indirect GHG emissions from the production of electricity will continue to decrease through implementation of State regulations that require electricity to be generated from renewable energy sources. GHG emissions in the transportation sector will also continue to decrease with implementation of State regulations.

Therefore, because the EIR for the City's 2040 General Plan demonstrates that compliance with applicable goals, objectives, policies, and programs would reduce the annual per capital GHGs in a manner that is consistent with CARB's statewide per capita target, and the proposed Master Plan would be in compliance with the applicable policies and programs as documented above, impacts associated with GHG emissions would be less than significant.

Timber Operations

Although CalEEMod addresses the loss in sequestration potential from vegetation removal associated with project construction, it does not address sequestration of carbon in lumber resulting from timber harvest, nor does it address carbon sequestration in growth of trees remaining in the study area. The Timber Harvesting Plan (THP) (Lindler, 2020) contains a detailed analysis of GHG emissions and carbon sequestration associated with the project to address the effects of THP implementation and timberland conversion.

As stated in the THP (Lindler, 2020), when a tree is harvested, most of the carbon-filled tree fibers become building products that sequester carbon in structures while a new crop of trees is planted and grown. To the extent these wood building products replace the demand for new concrete or steel building components, they offset substantial CO_2 emissions that are associated with the manufacture of cement and steel.

Some of the tree fibers such as branches and tops are left in the forest where they are sometimes burned to reduce fire hazard or are used to provide renewable energy through cogeneration. Either option will reduce likely GHG emissions over the no-project alternative.

While much of this material is left to decay and thus emit CO_2, most supplements the forest soils and duff layer where carbon is a major component to soil fertility. Bark, shavings, and chips are by-products that may be used in other building products or as fuel used to generate steam for electricity or to dry building products. While this biomass emits CO_2, such emissions would nonetheless occur through simple decay. These emissions are offset by the displacement of fossil fuels that would otherwise be needed to provide energy.

As stated in the THP, tree removal under the THP is estimated to represent less than five percent of the project acreage, and the majority of trees in the project area would be left standing. Considering these qualitative aspects, the project would have a less-than-significant impact. Further, the project is expected to recoup carbon emissions from the proposed project within the first two years, due to continued growth of trees in the study area.

As documented above, improvements completed under the Master Plan would be consistent with GHG-reducing provisions of the City's General Plan, and timber operations are projected to result in no net carbon emissions after one year; therefore, the project's impacts related to GHG emissions would be less than significant.

Question B

See discussion under Regulatory Context above. The Division of the State Architect (DSA) is responsible for reviewing construction documents to ensure mandatory measures included in the CALGreen Code and California Energy Code are implemented into the project design. The DSA verifies implementation of the mandatory measures during final inspection of the building. The plan

review and inspection process ensures that the proposed project does not conflict with any local or State regulations or plans adopted for the purpose of reducing GHG emissions; there would be no impact.

CUMULATIVE IMPACTS

GHG emissions and global climate change are, by nature, cumulative impacts. Unlike criteria pollutants, which are pollutants of regional and local concern, GHGs are global pollutants and are not limited to the area in which they are generated.

As discussed above, the State legislature has adopted numerous programs and regulations to reduce statewide GHG emissions, including indirect emissions that are produced when electricity is generated from fossil fuels. As the use of renewable energy sources for electricity generation increases in accordance with existing State regulations, GHG emissions associated with the use of electricity will continue to decrease. Further, GHG emissions in the transportation sector will continue to decrease with implementation of State regulations. In addition, all new residential and nonresidential developments in the State are required to implement applicable State Energy Code and CALGreen Code mandatory measures that were enacted to reduce statewide GHG emissions. Projects must also comply with local GHG-reduction plans and programs. Because the project will comply with State and local codes adopted to reduce GHG emissions, the project's contribution to cumulative GHG emissions would be less than significant.

MITIGATION

None necessary.

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4.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒

f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

REGULATORY CONTEXT

FEDERAL

Resource Conservation and Recovery Act

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

USEPA's Risk Management Plan

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

Federal Occupational Safety and Health Administration (OSHA)

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

U.S. Department of Transportation

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

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."*

California Building Standards Code

The California Building Standards Code (CBSC) consists of 13 parts, including the California Building Code, Energy Code, Fire Code, and Green Building Standards Code. Part 2 of the CBSC is the California Building Code (CBC) that includes standards for accessibility. Part 9 of the CBSC is the California Fire Code (CFC) that includes standards for minimum fire safety for new and existing buildings.

In the case of structures proposed by the College of the Siskiyous (COS), the Division of State Architect (DSA) is responsible for ensuring compliance with the California Building Code and California Fire Code. This includes the DSA's fire and life safety plan review. DSA requires the design professional to provide information addressing fire and life safety at the time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings; the DSA review also addresses fire department emergency vehicle access and fire suppression water supply.

Department of Toxic Substances Control

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

California Occupational Safety and Health Administration (Cal/OSHA)

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

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs) regulate hazardous substances, materials, and wastes that may affect surface water or groundwater through a variety of state statutes, including the Porter-Cologne Water Quality Control Act and underground storage tank cleanup laws. 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

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

LOCAL

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

Safety Element		
Goals	SF 1	A safe community.
	SF 2	A risk aware community prepared for natural disaster and emergencies.
	SF 4	Safe and clean air, soil, and water.
Objectives	SF 1.4	Increase awareness of fire risk.
	SF 2.1	Improve community-wide awareness and preparedness of potential natural and human caused emergencies.
	SF 3.3	Reduce the risk of damage and destruction from wildland fires.
	SF 4.1	Protect sensitive receptors in both the built and the natural environment.
Policies	SF 1.4.1	Collaborate with Cal Fire and the Weed Volunteer Fire Department to increase fire safety education.
	SF 3.3.1	The City of Weed Volunteer Fire Department and Cal Fire should review all development proposals and recommend measures to reduce fire risk.
	SF 4.1.1	All Certified Unified Program Agencies (CUPA) designated hazardous waste and spill sites should be cleaned to meet state standards.
Programs	SF 2.1.1.5	Increase community awareness by delineating areas at high risk of contamination, landslides, hazardous waste sites, and high fire risk zones.
	SF 3.3.1.1	Decline approval for proposed development not located within a five-minute response time of a fire station, unless acceptable mitigation measures are provided.
	SF 3.3.1.2	Require that all new development be provided with sufficient fire flow facilities at the time of permit issuance.
	SF 4.1.1.1	Evaluate existing response plans to ensure that emergency service resources are adequate to cope with toxic or hazardous material incidents.
	SF 4.1.1.2	Emergency response plans should incorporate potential emergency situations regarding hazardous waste and materials.
	SF 4.1.1.3	Implement appropriate training programs to handle hazardous waste and materials.

DISCUSSION OF IMPACTS

Questions A and B

During construction activities, it is anticipated that limited quantities of hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, paints, etc. would 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. However, construction contractors would be required to comply with applicable federal and state environmental and workplace safety laws and implement Best Management Practices (BMPs) for the storage, use, and transportation of hazardous materials.

In terms of operational impacts, a limited amount of potentially hazardous materials (e.g., solvents, oil, paint, gasoline, cleaning supplies, etc.) would be stored on the project site, primarily in the warehouse/shop building.

In addition, as stated in Section 4.6, heating for some of the buildings is supplied by 11 propane-fired hydronic boilers. The main propane tanks are located in the southwestern area of the campus, ±150 feet east of the existing training tower. CFC Chapter 61, Liquefied Petroleum (LP) Gases, includes requirements for the safe handling, storage, and use of LP-gas (e.g., propane) to minimize the potential for accidental releases of LP-gas and for exposure of flammable concentrations of LP-gas to potential ignition sources.

The CFC establishes minimum separation distances between LP-gas containers and buildings, public ways, and lot lines of adjoining developable properties, depending on the size of the LP-gas container. For example, if the LP-gas container is between 2,001 to 30,000 gallons, the separation distance for above-ground containers is 50 feet. If the container is between 30,001 and 70,000 gallons, the separation distance is 75 feet. Proposed buildings in proximity to the existing propane tanks include the Emergency Services Training classrooms, ±75 feet north of the tanks.

The proposed project would be subject to existing laws and regulations related to hazards and hazardous materials, including, but not necessarily limited to, those discussed under Regulatory Context above. Compliance with these regulations will ensure that the transport, use, and disposal of hazardous materials during construction and operation of the project does not create a significant hazard to the public or the environment. Further, the DSA is responsible for reviewing project plans to ensure compliance with the CFC. Therefore, impacts would be less than significant.

Question C

The Weed Union Elementary School on White Avenue is approximately one mile northeast of the project site. As described under Questions A and B, potential impacts associated with hazardous materials would be less than significant with compliance with existing laws and regulations, including but not limited to those identified under Regulatory Context.

Question D

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

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

Based on review of the records identified above, there are no hazardous materials sites in proximity to the project site. The nearest active clean-up site is approximately one-half mile northeast of the solar field site. Therefore, there would be no impact.

Question E

According to the Federal Aviation Administration, the nearest airport to the project area is the Weed Airport, approximately five miles northwest of the project site; therefore, there would be no impact.

Question F

The College of the Siskiyous (COS) has adopted an Emergency Response Plan that addresses all hazards that could potentially affect the campus and surrounding community. Administrators, supervisors, and key staff receive Incident Command System (ICS) training that focuses on how to respond to critical incidents on campus. Further, annual evacuation drills are coordinated by the COS Safety Committee for all facilities on campus. Students and staff learn locations of emergency exits in the buildings and are provided guidance on which direction they should travel when exiting each facility during an evacuation.

In order to notify students and staff of emergency information, COS has implemented a mass communication system that allows the College to send text messages to everyone registered with the system. COS also plans to implement an emergency mass communication sound system that can be heard across campus, which will enable those without cell phones or those in open areas, such as the football field, to receive emergency information in a timely manner.

Although a temporary increase in traffic could occur during construction and could interfere with emergency response times, construction-related traffic would be minor due to the overall scale of the construction activities. Further, construction-related traffic would be spread over the duration of the construction schedule and would be minimal on a daily basis. Therefore, impacts would be less than significant.

The proposed project does not involve a use or activity that could interfere with long-term emergency response or emergency evacuation plans for the area. DSA Policy PL 07-03 establishes requirements based on State Fire Marshal Regulations, CCR Title 19 (Public Safety), and the California Vehicle Code for fire and emergency access roadways on public school or community college campuses. Title 19 CCR, Article 3, Section 3.05, requires that *"access roads from every building to a public street shall be all-weather hardsurfaced (suitable for use by fire apparatus) right-of-way not less than 20 feet in width*." Such right-of-way shall be unobstructed and maintained only as access to the public street.

Further, fire/emergency access lanes under the jurisdiction of DSA must be a minimum of 20 feet wide and have a clear height no less than 13 feet, 6 inches, unless a lower height is approved. DSA is responsible for final approval of emergency access roadways. Therefore, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; there would be no impact.

Question G

As documented in Section 4.20 (Wildfires), the proposed project does not include any development or improvements that would increase the long-term risk of wildland fires or expose people or structures to a significant risk involving wildland fires.

Equipment used during construction activities may create sparks that could ignite dry grass. Also, the use of power tools and/or acetylene torches may increase the risk of wildland fire hazard. However, the CFC includes requirements that must be followed during construction, including Chapter 33 (Fire Safety During Construction and Demolition) and Chapter 35 (Welding and Other Hot Work). These regulations prescribe safeguards for construction, alteration, and demolition operations intended to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment, and promote prompt response to fire emergencies.

Regulations address fire protection systems, access to the site and building by fire personnel, hazardous materials storage and use, and temporary heating and other ignition sources. When necessary, trained personnel must be provided to perform constant patrols and watch for the occurrence of fire. Specific safeguards are included for welding, cutting, open torches, and other hot work operations to prevent sparks or heat from igniting exposed combustibles. Implementation of existing CFC regulations ensures that impacts during construction would be less than significant.

CUMULATIVE IMPACTS

The potential for hazard-related impacts during construction are site specific and have the potential to affect only a limited area on a temporary basis during completion of the improvements. The CFC includes requirements that must be followed during construction, including Chapter 33 (Fire Safety During Construction and Demolition) and Chapter 35 (Welding and Other Hot Work). These regulations prescribe safeguards to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment, and promote prompt response to fire emergencies during construction.

In terms of operational impacts, the transport of potentially hazardous materials (e.g., propane) would be regulated in a similar fashion to other cumulative projects that require the transport of hazardous materials for site-specific activities. The proposed project does not include the routine use, or disposal of hazardous materials, would not emit hazardous emissions, and would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires (refer to Section 4.20, Wildfire).

Therefore, the proposed project's potential for cumulative impacts would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

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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 groundwater 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 that 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;	☐	☐	☒	☐
(ii) 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 United States to obtain certification from the state that the discharge will comply with other provisions of the Act.
3. Section 402 establishes the NPDES, a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This permit program is administered by the SWRCB and is discussed in detail below.
4. Section 404, jointly administered by the US Army Corp 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 United States.

Federal Anti-Degradation Policy

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

Safe Drinking Water Act

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

Federal Emergency Management Agency (FEMA)

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

National Pollution 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 discharges. 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

California Building Standards Code

Title 24 of the California Code of Regulations (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. Part 11 of the CBSC is the Green Building Standards Code, also known as CALGreen. Section 5.106.10 (Grading and Paving) of the CALGreen Code includes standards on how site grading or a drainage system will manage surface water flows to keep water from entering buildings.

Porter-Cologne Water Quality Control Act

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

State Anti-Degradation Policy

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

National Pollution Discharge Elimination System

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

Construction Activity and Post-Construction Requirements

Construction sites that disturb one acre or more of total land area and/or are part of a larger common plan of development are subject to the NPDES permit for *Discharges of Storm Water Runoff associated with Construction Activity* (currently Order No. 2009-009-DWQ, amended by 2010-0014-DWQ & 2012-0006-DWQ), 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 or a Phase I or Phase II Municipal Separate Storm Sewer System (MS4) Permit. These requirements are intended to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect water quality impacts (i.e., pollution and/or hydromodification) upstream or downstream.

Where applicable, the SWPPP submitted to the SWRCB with the NOI must include a description of all post-construction stormwater management measures. The SWRCB 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 NCRWQCB Order R1-2015-0003 (NPDES No. CAG0024902), *Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region*, as amended. WDRs for this order include discharge prohibitions, receiving water limitations, monitoring, and reporting, etc. Coverage is obtained by submitting a NOI to the applicable RWQCB.

Dewatering Activities (Discharges to Land)

Construction dewatering activities that are contained on land and do not 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.

Water Quality Control Plans (Basin Plans)

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

implementation programs and policies to achieve those objectives. Waste discharge requirements (WDRs) were adopted in order to attain the beneficial uses listed for the Basin Plan areas.

Sustainable Groundwater Management Act

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

The SGMA requires local agencies in medium- and high-priority basins to form Groundwater Sustainability Agencies by July 1, 2017, and be managed in accordance with locally-developed Groundwater Sustainability Plans (GSPs). Basins identified as critically overdrafted are required to be managed under a GSP by January 31, 2020. All other medium- and high-priority basins must be managed under a GSP by January 31, 2022. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans.

LOCAL

City of Weed

The City’s General Plan includes the following Goals, Policies, and Programs related to hydrology and water quality:

Conservation Element		
Goal	CO 2.1	Maintain a clean and healthy water supply free of contaminants and dangerous chemicals.
Policy	CO 2.1	The City shall provide residents with access to clean and healthy water.
Programs	CO 2.1.1.1	Implement regular groundwater testing to assure quality and cleanliness.
	CO 2.1.1.2	Quickly and effectively clean hazardous material spills and ensure that water sources are unaffected.
Safety Element		
Goal	SF 3.2	Minimize the risk of personal injury and property damage due to flooding.
Policies	SF 3.2.1	Prohibit development in the 100-year flood zone unless mitigation measures meeting Federal Flood Insurance Administration criteria are provided.
	SF 3.2.2	Continue to participate in the National Flood Insurance program.
	SF 3.2.3	Enforce measures to minimize soil erosion and volume and velocity of surface runoff both during and after construction through application of the erosion control guidelines.
Programs	SF 3.2.1.1	Distinguish if future development is in the 100-year flood zones without mitigation.
	SF 3.2.2.1	Annual review changes to the National Flood Insurance program and inform residents within the 100-year flood zone of significant changes.
	SF 3.2.3.1	Require future project to calculate the change in storm runoff due to new development, and mitigate significant impacts.

	SF 3.2.3.2	Require that best practices for erosion during construction be followed for all construction projects.
Public Facilities Element		
Goal	PF 2.1	Protect the community from risks associated with flooding.
Policies	PF 2.1.1	The City shall promote the orderly and efficient expansion of the storm drainage system to meet existing and projected needs.
	PF 2.1.2	The City shall require drainage improvements for new development to mitigate on-site and off-site impacts attributable to new development.

DISCUSSION OF IMPACTS

Questions A and E

As discussed under Regulatory Context above, the SGMA established a framework for groundwater resources to be managed by local agencies in areas designated as medium or high priority basins. According to the Department of Water Resources, the eastern area of the campus site is located within a medium-priority basin (Shasta Valley Basin 1-004).

On April 4, 2017, the Siskiyou County Flood Control and Water Conservation District elected to become the Groundwater Sustainability Agency (GSA) for the Shasta, Scott, and Butte Valley Basins. In June 2020, the GSA prepared the *Shasta Valley Groundwater Basin Stakeholder Communication and Engagement Plan* that described the GSA's plans for development of the GSP for the Shasta Valley Basin. It is anticipated that the final GSP will be adopted by November 2021. Future development under the Facility Master Plan would need to comply with the GSP and any other applicable groundwater management plans that are in place at the time construction is proposed.

The proposed project has the potential to temporarily degrade water quality due to increased erosion during project construction; however, as discussed under Regulatory Context above, the SWRCB Construction General Permit requires implementation of an effective SWPPP that includes BMPs to control construction-related erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat. In accordance with Division of the State Architect (DSA) requirements, the DSA-approved inspector would be responsible for verifying that erosion control measures are implemented in accordance with approved plans. Because BMPs for erosion and sediment control would be implemented in accordance with existing requirements, impacts during construction would be less than significant.

In addition, the proposed project is subject to post-construction requirements included in the SWRCB Construction General Permit to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect impacts with respect to stormwater runoff (i.e., pollution and/or hydromodification) upstream or downstream. Post-construction measures are defined as structural and non-structural controls that detain, retain, or filter the release of pollutants to receiving waters after final stabilization is attained. Non-structural controls are required unless the discharger demonstrates that non-structural controls are infeasible or that structural controls will produce greater reduction in water quality impacts. Nonstructural controls may include vegetated swales, soil quality enhancement, setbacks, buffers and/or rooftop and impervious surface disconnection. Nonstructural controls can be included as a landscape amenity.

The SWPPP submitted to the SWRCB with the NOI for the proposed project must include a description of all post-construction stormwater management measures and a plan for long-term maintenance. 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.

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

Compliance with the SWRCB Construction General Permit and NCRWQCB permit conditions ensures that the project would not violate any water quality standards or waste discharge requirements or conflict with or obstruct implementation of a water quality control plan. In addition, compliance with the applicable GSP and any other related plan that is in place at the time construction is proposed ensures that the project would not conflict with a sustainable groundwater management plan. Impacts would be less than significant.

Question B

There are presently four wells on the campus property. The wells are approximately 150 feet deep with a static level of 50 feet. Total well capacity exceeds 300 gallons per minute (GPM). It is believed that the aquifer for the water supply is part of the region's volcanic network originating from the snow pack of Mt. Shasta and other nearby mountains. Currently, the sole use of the pumped groundwater is to geothermally cool campus buildings and provide for irrigation; the cool water circulates through the buildings and is then conveyed to the irrigation system for use as irrigation water. The proposed project would not increase the use of groundwater in a manner that would substantially decrease groundwater supplies.

The proposed project would include construction of impervious surfaces (e.g. buildings, roads, and driveways). The addition of impervious surfaces would decrease the area available for water penetration, thereby reducing local groundwater recharge potential. The increase in impervious surfaces represents a very small percentage of the entire surface area of the hydrologic region.

Because runoff would eventually be directed to areas with pervious surfaces, and open space areas on the campus property would continue to provide for groundwater recharge, the proposed project would not substantially interfere with groundwater recharge. Therefore, impacts on groundwater supplies or recharge are less than significant.

Question C

Storm drainage in the study area consists of both surface and subsurface drainage features. Surface storm drainage features consist primarily of constructed ditches. Subsurface storm drainage features typically consist of drop inlets that discharge to underground pipes; the pipes ultimately discharge to the surface in areas where the water is not a nuisance.

The proposed project does not include any components that would alter the course of a stream or river. However, as stated above, the proposed project would increase the impervious surface area of the project site by constructing driveways, rooftops, and roads that would generate stormwater runoff. If drainage is not adequately handled, the proposed project could increase the amount of runoff in a manner that could result in potential risks related to erosion/siltation, increase flooding on- or off-site, or generate additional sources of polluted runoff.

As discussed under Regulatory Context, Section 5.106.10 (Grading and Paving) of the CALGreen Code, improvement plans must identify how site grading or a drainage system will manage surface water flows. In addition, the SWRCB Construction General Permit requires the development and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must include a description of all post-construction stormwater management measures. The SWPPP will ensure that post-construction runoff does not result in flooding on- or off-site.

Therefore, with implementation of CALGreen Code and SWRCB requirements for drainage and stormwater management, 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 site is located over 90 miles east of the Pacific Ocean and is not in a tsunami zone. A seiche is a large wave generated in an enclosed body of water in response to ground shaking. The closest large body of water to the project site is Lake Shastina, approximately six miles to the north. Seiches could potentially be generated in Lake Shastina due to very strong ground-shaking; however, due to the distance from the project site, the project site has no potential for inundation by seiche. According to the FEMA Flood Map Service Center (Panel 06093C2567D, effective January 19, 2011), the project site is not located within a designated flood hazard zone. Therefore, there is no potential for release of pollutants due to inundation by seiche, tsunami, or flood.

CUMULATIVE IMPACTS

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 degradation of water quality, adverse impacts to groundwater supplies and groundwater recharge, and an increased risk of flooding due to additional surface runoff generated by the projects.

All projects in the State that result in land disturbance of one acre or more and/or are part of a larger common plan of development are required to comply with the State Water Resources Control Board General Construction NPDES permit which requires implementation of post-construction measures to ensure that new development does not cause or contribute to impacts from stormwater runoff upstream or downstream. In addition, new development must comply with CALGreen Code requirements related to grading and drainage. These regulations are intended to reduce the potential for cumulative impacts, both during and post-construction. Compliance with State regulations and implementation of BMPs ensures that the project's cumulative contribution to hydrology and water quality impacts is less than significant.

MITIGATION

None necessary.

DOCUMENTATION

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed October 2020.

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Siskiyou County Groundwater Sustainability Agency. 2020. Shasta Valley Groundwater Basin Stakeholder Communication and Engagement Plan. https://www.co.siskiyou.ca.us/sites/default/files/fileattachments/natural_resources/page/8481/shasta_ce_plan_june2020.pdf. Accessed August 2020.

State of California, Department of Water Resources. 2020. Groundwater Sustainability Act Map Viewer. https://sgma.water.ca.gov/webgis/index.jsp?appid=gasmaster&rz=true. Accessed August 2020.

_____. 2020. Sustainable Groundwater Management Act Portal. Siskiyou County Flood Control and Water Conservation District GSA – Shasta Valley. https://sgma.water.ca.gov/portal/gsa/print/456. Accessed August 2020.

4.11 LAND USE AND PLANNING

Would the project:

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

REGULATORY CONTEXT

FEDERAL

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

STATE

California Government Code

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

LOCAL

City of Weed

The City's General Plan includes goals, objectives, policies, and programs designed for the purpose of avoiding or minimizing environmental effects. The City of Weed Municipal Code implements the City's General Plan. The purpose of the land use and planning provisions of the Code (Title 18, Zoning) is to provide for the orderly and efficient application of regulations and to implement and supplement related laws of the state of California, including but not limited to the California Environmental Quality Act (CEQA).

DISCUSSION OF IMPACTS

Question A

Land use impacts are considered significant if a proposed project would physically divide an existing community (a physical change that interrupts the cohesiveness of the neighborhood). The proposed

project would not create a barrier for existing or planned development; therefore, there would be no impact.

Question B

As discussed in each resource section of this Initial Study, the proposed project is consistent with applicable land use plans, policies and regulations, including regulations of the agencies identified in Section 1.6 of this Initial Study. Where necessary, mitigation measures are included to reduce impacts to less-than-significant levels. Therefore, with implementation of the mitigation measures identified in Section 1.9, the proposed project would not conflict with any plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. No additional mitigation measures are necessary.

CUMULATIVE IMPACTS

Cumulative projects in the vicinity of the project area, including population growth resulting from build-out of the 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 would not contribute to the potential for adverse cumulative land use effects.

MITIGATION

None necessary.

DOCUMENTATION

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed October 2020.

_____. 2019. Weed Municipal Code. Title 18, Zoning. https://library.municode.com/ca/weed/codes/code_of_ordinances?nodeId=WEED_MUNICIPAL_CODE_1978. Accessed December 2018.

4.12 MINERAL RESOURCES

Would the project:

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

REGULATORY CONTEXT

FEDERAL

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

STATE

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act (SMARA), Chapter 9, Division 2 of the Public Resources Code (PRC), provides a comprehensive surface mining and reclamation policy to ensure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition.

Mineral Resource Zones (MRZs) are applied to sites determined by the California Geological Survey (CGS) as being a resource of regional significance, and are intended to help maintain mining operations and protect them from encroachment of incompatible uses. The Zones indicate the potential for an area to contain significant mineral resources.

LOCAL

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

DISCUSSION OF IMPACTS

Questions A and B

The CGS does not identify any active mines within a two-mile radius of the project site; therefore, the project would have no impact on existing mining operations. According to the CGS, there are no designated Mineral Resource Zones in Siskiyou County. Further, the project site is in an urbanized area that is not conducive to mining operations. Therefore, the proposed project would not result in the loss of availability of a locally important mineral resource.

CUMULATIVE IMPACTS

As 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

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed October 2020.

State of California, Department of Conservation, California Geological Survey. SMARA Mineral Lands Classification Data Portal. http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc. Accessed January 2020.

_____. 2016. SMARA Mines Interactive Map. http://maps.conservation.ca.gov/mol/index.html. Accessed January 2020.

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.

Attenuation The reduction of noise.

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.

CNEL Community Noise Equivalent Level. The average sound level over a 24-hour period, with a penalty of 5 dB added during evening hours (between 7:00 PM and 10:00 PM) and a penalty of 10 dB added during nighttime hours (between 10:00 PM and 7:00 AM).

Frequency The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.

L_{50} The A-weighted sound level that is exceeded 50 percent of the sample time.

L_{dn} Day-Night Average Sound Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of 10 decibels to sound levels in the night after 10 p.m. and before 7 a.m. (Note: CNEL and Ldn represent daily levels of noise exposure averaged on an annual or daily basis).

L_{eq}	The sound level in decibels, equivalent to the total sound energy measured over a stated period of time. L_{eq} includes both steady background sounds and transient short-term sounds.
L_{max}	The maximum A-weighted noise level during the measurement period.

REGULATORY CONTEXT

FEDERAL

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

STATE

California Government Code §65302(f)

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

California Building Code

The California Building Code (CBC (CCR Title 24, Part 2) includes noise insulation standards that apply to all new construction. The CBC requires that interior noise levels attributable to exterior sources not exceed 45 dB in any habitable room. The noise metric (i.e., day-night average sound level [Ldn] or the community noise equivalent level [CNEL]) must be consistent with the Noise Element of the jurisdiction's General Plan. Additional requirements are included for multi-family residential buildings.

LOCAL

City of Weed General Plan

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

Noise Element		
Goal	NS 1	A quiet and peaceful city.
Objectives	NS 1.1	Limit noise in residential areas and near sensitive receptors.
	NS 1.5	Limit noise impacts from construction-related activities
Policies	NS 1.1.1	The City shall protect residential areas and noise sensitive receptors such as schools, senior housing, worship places, and health centers from noise generating sources.
	NS 1.1.2	New construction must be compliant with Housing and Urban Development (HUD) standards.
	NS 1.5.1	The City shall adopt regulations to limit construction-related noise.
Programs	NS 1.1.1.1	Protect noise sensitive areas with discretionary review procedures such as conditional permits.

NS 1.1.2.1	Adopt an ordinance that limits exterior noise of new residential developments to 65 decibels and interior noise level to 45 decibels.
NS 1.5.1.1	Require restrictions on construction activity during nighttime when issuing construction permits.

City of Weed Municipal Code: Chapter 9.18 – Noise

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

Table 4.13-1
City of Weed Maximum Allowable Noise Levels

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

Source: City of Weed Municipal Code, 2020

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

DISCUSSION OF IMPACTS

Question A

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

Existing sensitive receptors that may be affected by construction noise include single-family residences on Bel Air Avenue ±100 feet east of the solar field site, multi-family residences on Siskiyou Way ±150 feet east of the campus site, and Bel Air Park ±100 feet north of the campus site. On-site sensitive receptors include students in classrooms and students who live on campus. Construction activities would occur as close as ±200 feet from existing student housing facilities and ±100 feet from existing classrooms.

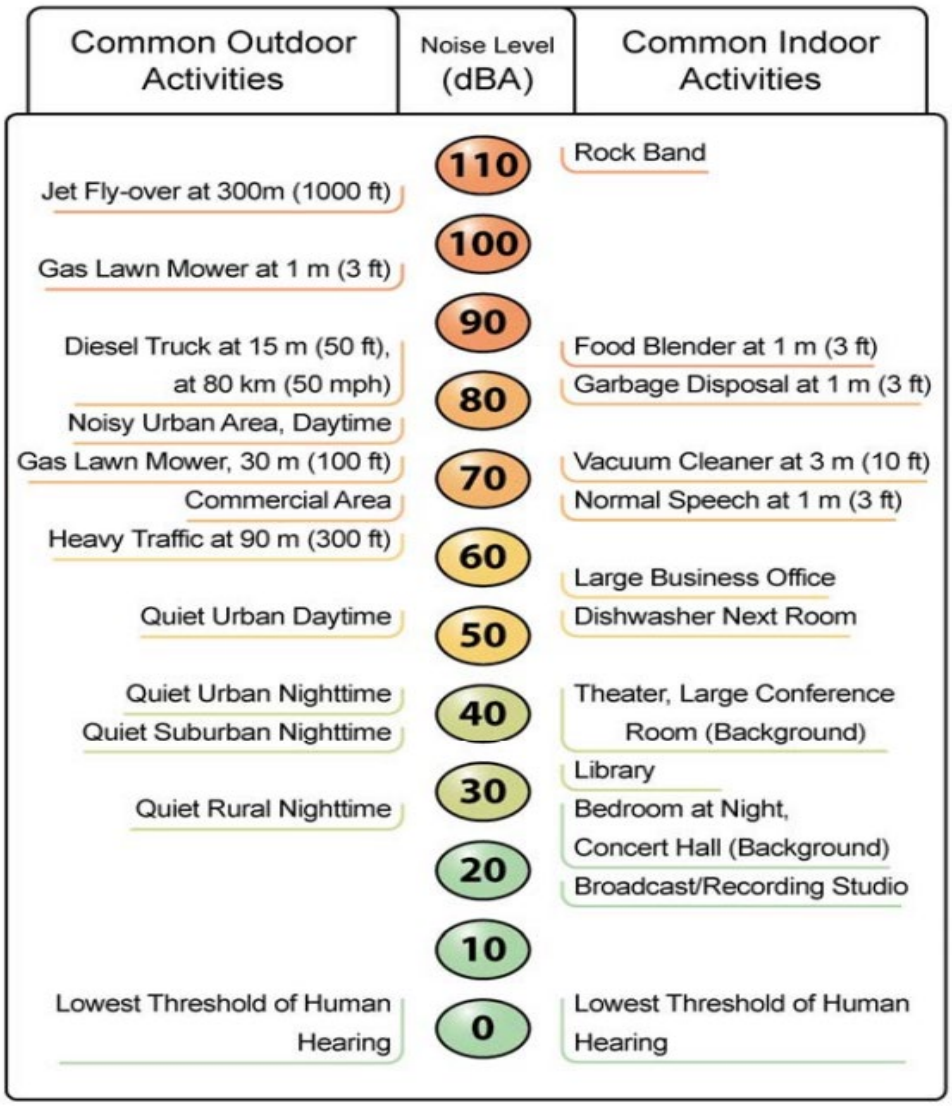
The effects of noise on people can include annoyance, nuisance, and dissatisfaction; interference with activities such as speech, sleep, and learning; and physiological effects such as hearing loss or sudden startling. A common method to predict human reaction to a new noise source is to compare a project's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

Construction Noise

Temporary noise impacts 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 would be generated during delivery of construction equipment and materials to the project site; however, heavy equipment would remain on-site for the duration of construction. Noise impacts resulting from construction activities would depend on: 1) the noise generated by various pieces of construction equipment; 2) the timing and duration of noise-generating activities; 3) the distance between construction noise sources and noise-sensitive receptors; and 4) existing ambient noise levels.

Figure 4.13-1 shows noise levels of common activities to enable the reader to compare construction-noise with common activities.

Figure 4.13-1
Noise Levels of Common Activities



Source: Caltrans, 2016

Noise levels from construction-related activities would fluctuate, depending on the number and type of construction equipment operating at any given time. As shown in **Table 4.13-2**, construction equipment anticipated to be used for project construction typically generates maximum noise levels ranging from 74 to 89 dBA at a distance of 50 feet.

TABLE 4.13-2
Examples of Construction Equipment Noise Emission Levels

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

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

Noise Attenuation

Noise from construction activities generally attenuates at a rate of 6 dBA per doubling of distance, assuming the intervening ground is a smooth surface without much vegetation. 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.

The analysis of potential impacts from construction noise conservatively assumes that noise would attenuate at a rate of 6 dBA per doubling of distance.

Cumulative Noise – Identical Sources

Because it is a logarithmic unit of measurement, a decibel cannot be added or subtracted arithmetically. The combination of two or more identical sound pressure levels at a single location involves the addition of logarithmic quantities as shown in **Table 4.13-3.** A doubling of identical sound sources results in a sound level increase of approximately 3 dB. Three identical sound sources would result in a sound level increase of approximately 4.8 dB. For example, if the sound from one scraper resulted in a sound pressure level of 89 dB, the sound level from two scrapers would be 92 dB, and the sound level from three scrapers would be ±93.8 dB.

TABLE 4.13-3
Cumulative Noise: Identical Sources

Number of Sources	Increase in Sound Pressure Level (dB)
2	3
3	4.8
4	6
5	7
10	10
15	11.8
20	13
50	17

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

Cumulative Noise – Different Sources

As shown in **Table 4.13-4**, the sum of two sounds of a different level is only slightly higher than the louder level. For example, if the sound level from one source is 80, and the sound level from the second source is 89 dB, the level from both sources together would be 89.5.

TABLE 4.13-4
Cumulative Noise: Different Sources

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

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

Potential Construction Noise

With two pieces of equipment with a noise level of 89 dBA operating simultaneously, noise levels could sporadically reach approximately ±85 dBA at the exteriors of the residences on Bel Air Avenue and at the Community Pool in Bel Air Park. Exterior noise levels at the residences on Siskiyou Way could reach ±82 dBA.

As noted above, interior noise levels within residential units are approximately 25 decibels lower than exterior noise levels with the windows closed. Interior noise levels at the residences on Bel Air Avenue could sporadically reach 60 dBA, and interior noise levels at the residences on Siskiyou Way could reach 57 dBA, provided that the windows were closed.

In addition to noise from construction equipment, California Occupational Safety and Health Administration (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. Noise levels associated with reverse signal alarms could temporarily reach between 91 dBA and 106 dBA at the exteriors of the nearest residences; interior noise levels could sporadically reach 66 to 81 dBA, provided that the windows were closed.

Thresholds of Significance – Construction Noise
As stated under Regulatory Context, the City's Municipal Code allows an exemption for temporary noise from construction and demolition equipment.

In addition, the California Division of Safety and Health and OSHA have established thresholds for exposure to noise in order to prevent hearing damage (Caltrans, 2013). **Table 4.13-5** identifies the maximum allowable daily noise exposure to prevent hearing damage.

TABLE 4.13-5
Thresholds for Exposure to Noise to Prevent Hearing Damage

Sound Level	Maximum Exposure Per Day to Prevent Hearing Damage
90 dBA	8 hours
95 dBA	4 hours
100 dBA	2 hours
105 dBA	1 hour
110 dBA	30 minutes
115 dBA	15 minutes

Source: Caltrans, 2020

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, 2019). 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.

Disregarding the noise attenuation due to intervening topography, barriers, wind, and other factors, in the worst-case scenario (three pieces of equipment operating simultaneously with a noise level of 89 dBA – creating a net noise level of 93.8 dBA), exterior noise levels from construction equipment operation could reach approximately 88 dBA at the exteriors of the nearest residence, and could occasionally reach up to 106 dBA if reverse signal alarms are used, provided that the windows were closed. Interior noise levels at the residences due to construction equipment operation could sporadically reach ±63 dBA, and could reach up to ±81 dBA if reverse signal alarms are used.

Exterior noise levels from construction equipment operation could sporadically reach ±84 dBA at the nearest residence on Siskiyou Way, and could sporadically reach up to ±102 if reverse signal alarms are used. Interior noise levels at the residences due to construction equipment operation could sporadically reach ±59 dBA, and could reach up to ±77 dBA if reverse signal alarms are used.

However, reverse signal alarms are needed only intermittently, and each occurrence involves only seconds of elevated noise levels. In addition, construction equipment does not operate continuously throughout the entire work day. Therefore, while construction noise may reach considerable levels for short instances, average construction noise levels at the nearest residences would be moderate and would not exceed the standards for noise exposure to prevent hearing damage identified in **Table 4.13-5.**

In order to minimize impacts from construction noise, **MM 4.13.1** limits construction activities to between the hours of 7:00 A.M. and 7:00 P.M, and **MM 4.13.2** requires that construction equipment be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds. Therefore, impacts during construction would be less than significant with implementation of **MM 4.13.1** and **MM 4.13.2**.

Operational Noise

Table 4.13-1 identifies the City's noise level standards for both daytime (7:00 AM – 10:00 PM) and nighttime hours (10:00 PM – 7:00 AM). If a new project exceeds the noise level standards and adversely impacts an occupant of a new use or an existing sensitive receptor, the new project is responsible for including appropriate noise attenuation in the project design.

Potential Impacts of the Project on Sensitive Receptors in the Project Area

Off-Site Project-Related Traffic Noise

As discussed above, the project includes demolition of obsolete buildings. Uses currently housed in these buildings would be consolidated in other buildings on the campus or in the proposed new buildings. The project also includes construction of on-campus student housing for up to 396 students, and an increase in traffic over existing operations is not anticipated to occur adjacent to residences on Siskiyou Way, College Avenue, or other local streets.

It takes a doubling of traffic to increase noise levels by 3 dB (Caltrans, 2013). As stated above, an increase in noise of 3 dB is barely perceptible. Because the project would not result in a doubling of traffic over existing conditions, the project's incremental increase in off-site traffic noise on the local street system is less than significant.

On-Site Parking Lot Activities

Noise associated with parking lot activities would be generated from car doors slamming, music, and people conversing, primarily in the morning and evening when students and employees enter and exit the site. The proposed project would include addition of about 20 parking spaces near Bel Air Park, adjacent to an existing parking area. This new use would represent substantially less than a doubling of the existing parking capacity in the area, and would thus not result in a perceptible increase in noise levels. All other new parking would be in the interior of the campus, and has no potential to adversely affect off-site uses. Therefore, parking activities would not result in a significant increase in noise levels.

On-Site Outdoor Activities

The project includes relocation of an existing practice field (to a location farther from noise-sensitive uses) and construction of a new soccer field at the site of the current practice field. Noise associated with these areas could include occasional shouting, laughing, and similar noise associated with typical outdoor sports fields. However, the nearest off-site sensitive

receptor is approximately 800 feet to the east. The area between the new soccer field and the sensitive receptor consists of dense trees and other vegetation, which is expected to reduce noise by up to 10 dB (Caltrans, 2013). Additionally, the proposed new buildings would shield the new soccer field from nearby residents. Although noise levels at the new soccer field could exceed those of the existing practice field, with noise attenuation from new buildings the net increase would be minimal. In any case, noise levels would remain lower than from the nearby football field. Therefore, impacts of the new/relocated fields are not expected to be significant.

Outdoor Stationary Equipment

Stationary equipment (e.g., emergency generators, heating, ventilation, and air conditioning systems, etc.) has the potential to generate noise during operations. Because specific information on all equipment that would be installed in conjunction with future development is not known at this time, there is a potential for impacts from mechanical equipment to be significant. **MM 4.13.3** is included to ensure that noise levels associated with outdoor stationary equipment do not exceed 55 dBA Ldn/CNEL at the exterior of the nearest residences and 45 dBA Ldn/CNEL in any habitable room in the residences. If required, the building design would incorporate noise attenuation measures (e.g., shielding) to ensure compliance with these noise levels.

Trash Collection and Snow Removal

Trash collection services in the City occur one time per week. This would not change with implementation of the proposed project. Snow removal occurs intermittently during the snow season, which is generally November through March of each year. Although the proposed project would require snow removal services, these are services that are presently provided in this area of the City, and the proposed project would not significantly increase noise levels above those that presently occur during snow removal operations.

Potential Impacts to On-Site Sensitive Receptors (Students)

The proposed project is subject to the requirements of §5.507.4 (Acoustical Control) of the CALGreen Code. New development must employ building assemblies and components to ensure that the interior noise environment attributable to exterior sources does not exceed applicable noise limits in occupied areas of buildings during any hour of operation. The Division of the State Architect (DSA) must review building construction plans and verify that appropriate sound-rated assemblies (e.g., walls, windows, exterior doors, etc.) are implemented into the project design to ensure compliance with the interior noise standards for schools.

Therefore, implementation **MM 4.13.1** through **4.13.3,** and compliance with DSA noise standards for schools ensures that the proposed project would not significantly increase the ambient noise levels in a manner that would adversely affect existing sensitive receptors in the project vicinity, either during construction or operation; impacts would be less than significant.

Question B

Typical sources of ground-borne vibration include construction equipment, steel-wheeled trains, and vehicles on rough roads. The proposed project does not include any components that would result in long-term impacts associated with vibration. Vibration during construction would occur only when high vibration equipment (e.g., compactors, large dozers, etc.) are operated. The proposed project may require limited use of equipment with high vibration levels during construction. Potential effects of ground-borne vibration include perceptible movement of building floors, rattling windows, shaking of items on shelves or hangings on walls, and rumbling sounds. In extreme cases, vibration can cause damage to buildings. Both human and structural response to ground-borne vibration are influenced by various factors, including ground surface, distance between the source and the receptor, and duration.

The most common measure used to quantify vibration amplitude is the peak particle velocity (PPV). PPV is a measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. Although there are no federal, state, or local regulations for ground-borne vibration, Caltrans has developed criteria for evaluating vibration impacts, both for potential structural damage and for human annoyance. The Caltrans Transportation and Construction Vibration Guidance Manual (2013), was referenced in the analysis of construction-related vibration impacts. **Table 4.13-6** includes the potential for damage to various building types as a result of ground-borne vibration. Transient sources include activities that create a single isolated vibration event, such as blasting. Continuous, frequent, or intermittent sources include jack hammers, bulldozers, and vibratory rollers.

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

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

Source: Caltrans, 2020

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

TABLE 4.13-7
Human Response to Ground-Borne Vibration

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

Source: Caltrans, 2020

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

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

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

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

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

$$PPVEquipment = PPVRef\ (25/D)^n$$

Where:

PPV_{Ref} =	*reference PPV at 25 ft.*
D =	*distance from equipment to the receiver in ft.*
n =	*1.1 (the value related to the attenuation rate through ground)*

Based on this equation, during use of a vibratory roller, vibration levels at the nearest sensitive receptors would be ±0.046 at the residences on Bel Air Avenue and at Bel Air Park, and ±0.029 at the residences on Siskiyou Way. These vibration levels would not be at a level that would cause structural damage (see **Table 4.13-6**). In addition, the vibration levels would range from barely perceptible to distinctly perceptible at the nearest residences, but would not rise to a level that would be considered disturbing (see **Table 4.13-7**).

Because increased ground-borne vibration is temporary and would cease at completion of the project, and **MM 4.13.1** would reduce the potential for human annoyance by limiting construction hours, impacts would be less than significant.

Question C

According to the Federal Aviation Administration, the nearest airport to the project area is the Weed Airport, approximately five miles northwest of the project site; 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

In 2017, the City completed the California Environmental Quality Act (CEQA) review for the proposed replacement of old water mains and installation of fire hydrants surrounding the campus site to ensure reliable water service and fire flows in areas surrounding the College. Improvements for the City's project would occur in the public road right-of-way (ROW) of College Avenue, Bel Air Avenue, Dollar Avenue, and Phelps Avenue; on City-owned property east of Bel Air Park, north of the Weed Community Pool; and in an alleyway east of Oregon Street and west of S. Weed Boulevard.

There is a possibility that construction periods for these projects may overlap and contribute to temporary cumulative construction noise and vibration impacts. Given the linear nature of the City's infrastructure improvements, project noise and vibration would be intermittent and occur for short periods of time until the equipment proceeds to the next work area.

The City's waterline improvements project is also subject to limitations on work hours and requirements for noise-reduction intake and exhaust mufflers and engine shrouds on construction equipment. With implementation of **MM 4.13.1** and **MM 4.13.2**, the proposed project's contribution to cumulative noise and vibration impacts during construction would be less than significant.

In terms of cumulative operational impacts, all new development projects in the City are required to comply with adopted interior and exterior noise standards. Noise attenuation is required as necessary to ensure compliance with the noise standards. Implementation of noise attenuation measures is verified by the City's Building Official or DSA during construction plan review and inspection. With implementation of **MM 4.13.3**, and compliance with existing building codes, the proposed project's cumulative operational noise and vibration impacts would be less than significant.

MITIGATION

MM 4.13.1 Construction activities shall be limited to between the hours of 7:00 a.m. and 7:00 p.m.

Exceptions to these limitations may be approved by the Superintendent/President to prevent disruption of classroom activities and/or campus events, and for activities that require interruption of utility services to allow work during low demand periods, or to alleviate traffic congestion and safety hazards.

MM 4.13.2 Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.

MM 4.13.3 Prior to submittal of development plans to the Division of the State Architect, College of the Siskiyous shall ensure that outdoor noise-generating stationary equipment (e.g., emergency generators, heating and air conditioning units, exhaust fans, etc.) would not result in noise levels exceeding 55 dBA Ldn/CNEL at the nearest residences and 45 dBA Ldn/CNEL in any habitable room in the residences. Noise attenuation measures (e.g., installing shielding/noise barriers, installing generators inside enclosures, etc.) shall be implemented as necessary to ensure compliance with these noise standards.

DOCUMENTATION

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Engineering ToolBox. 2003. *Adding Decibels*. [online]. https://www.engineeringtoolbox.com/adding-decibel-d_63.html. Accessed December 2019.

Federal Aviation Administration. 2020. Airport Facilities Data. https://www.faa.gov/airports/western_pacific/. Accessed July 2020.

4.14 POPULATION AND HOUSING

Would the project:

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

REGULATORY CONTEXT

FEDERAL

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

STATE

California Government Code §65581

California Government Code §65581 *et seq.* requires a Housing Element to be included in all city and county General Plans. State Housing Element law mandates that jurisdictions provide sufficient land to accommodate a variety of housing opportunities for all economic segments of the community. Compliance with this requirement is measured by the jurisdiction's ability to provide adequate land to accommodate a share of the region's projected housing needs for the applicable planning period. This share is known as the Regional Housing Needs Allocation (RHNA).

LOCAL

City of Weed General Plan

The City's General Plan includes the following Goals, Objectives, and Policies related to population and housing:

Land Use Element		
Goals	LU 1	A balanced and diversified set of land uses within the City.
	LU 2	A community characterized by a compact form.
Objectives	LU 1.2	Diversify the supply of housing types throughout the City that meets the needs of all residents.
	LU 2.1	Increase infill development where feasible.
Policy	LU 2.1.1	Prioritize infill development within key growth areas.
Housing Element		
Goals	HO 1	An adequate supply of housing.

	HO 2	A diversified supply of housing.
	HO 4	Affordable housing for all income levels and demographic groups.
Objectives	HO 1.1	Accommodate population growth by providing at least 650 new housing units by 2040.
	HO 2.2	Expand multifamily and apartment housing options in key growth areas.
	HO 4.1	Accommodate 200 new affordable housing units (for low and very-low income categories) by 2040.
Policy	HO 2.2.1	Increase the number of housing units within key growth areas.

DISCUSSION OF IMPACTS

Question A

A project would induce unplanned population growth if it conflicted with a local land use plan (e.g., a General Plan) and induced growth in areas that aren't addressed in a General Plan or other land use plan.

As discussed in Section 4.8 (Greenhouse Gas Emissions) under Question A, the City's General Plan identifies the College of the Siskiyous (COS) as being within the Bel Air Key Growth Area. The General Plan states that Bel Air is a neighborhood that primarily caters to the college community and includes retail, arts, and recreational uses. The General Plan states that medium-density housing is proposed in the area of College Avenue that can accommodate the City's population growth as well as growth of the COS community. To accommodate growth in the college population, the General Plan proposes high-density residential development for student housing adjacent to existing apartments east of the COS campus.

The Final Environmental Impact Report (FEIR) for the City's 2040 General Plan, prepared in 2017, states that the City could expect the need for 700 additional housing units to accommodate growth through 2040, and this could be achieved through a combination of infill development in six targeted key growth areas, an increase in the density of development, and greenfield development along the periphery of existing neighborhoods.

The FEIR includes projections of potential housing units in each of the key growth areas and estimates that 246 housing units potentially could be constructed in the Bel Air area. As stated above, the project includes 124 on-campus housing units that could house up to 396 students; based on average vacancy rates, it is anticipated that 355 students would be housed at any given time.

For comparison, according to the Department of Finance, there were an average of 2.45 persons per household in the City of Weed as of January 1, 2020. A typical 124-unit residential development in the City would generate a population of about 304 people. The proposed student housing would result in a population increase slightly higher than an average household; however, the project is consistent with growth projections in the Bel Air area.

Therefore, the project would not induce substantial unplanned population growth in the area, either directly or indirectly. The impacts of on-campus housing on population growth would be less than significant.

Question B

While obsolete structures (see Section 3.2 Project Components) would be demolished to accommodate proposed construction, the proposed project would not directly impact any existing housing units. The proposed project includes the construction of additional student housing in order to accommodate an increase in the student population living on campus. Therefore, the project would not displace people or housing.

CUMULATIVE IMPACTS

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

MITIGATION

None necessary.

DOCUMENTATION

California Department of Finance. 2020. E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2020. http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/ Accessed November 2020/

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed October 2020.

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4.15 PUBLIC SERVICES

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

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

REGULATORY CONTEXT

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

LOCAL

City of Weed

The City's General Plan includes the following Goals, Objectives, Policies, and Programs related to public services:

Public Facilities Element		
Goals	PF 5	A safe, peaceful, and orderly community with adequate police and fire services.
	PF 6	A community with high quality education facilities and services.
Objectives	PF 5.1	Staff public service facilities adequately to respond to emergency and fire situations.
	PF 6.1	Improve the quality and availability of education facilities and services.
Policy	PF 5.1.1	The City shall add fire, police, and emergency response facilities as needed to address population growth and distribution patterns.
Programs	PF 5.1.1.1	Monitor population distribution patterns and determine potential facility locations based on flood, fire, and seismic hazards.
	PF 5.1.1.3	Evaluate emergency response times to fire, safety, and medical emergencies and increase supply of safety personnel as needed to reduce response times.
Health Element		
Goals	HE 2	A community with access to medical services
	HE 3	A community with access to parks and recreation.
Objectives	HE 2.3	Maintain staff and facilities that will continue to support a coordinated and effective response to medical emergencies in the City.
	HE 3.1	Provide a comprehensive and integrated system of parks, plazas, playgrounds, trails, and open space.
	HE 3.2	Provide a diverse range of park types, functions, and recreational opportunities to meet the physical and social needs of the community.
	HE 3.3	Expand and tailor recreational programs and services to meet evolving community needs.
Policies	HE 2.3.1	Coordinate with local jurisdictions, employers, and industries to ensure that access to emergency medical services is adequate.
	HE 3.1.1	The City shall maintain park facilities including playgrounds, fields, landscaped areas, trails, and amenities to encourage safe and active use.
	HE 3.2.1	Provide recreation programs to serve people of all incomes, cultural backgrounds, ages, and levels of physical capability.
	HE 3.3.1	Programs and services should remain accessible and relevant to today's residents, respond to unique cultural, historic, and social needs as well as changing demographics.

Programs	HE 2.3.1.1	Review the Emergency Preparedness Plan and ensure that it reflects adequate access to emergency medical service.
	HE 3.1.1.1	Create a Parks Maintenance Plan for all city-owned and operated parks, trails, landscapes, and greenways.

DISCUSSION OF IMPACTS

Questions A, B, D, and E

Fire protection services within the City are provided by the Weed Volunteer Fire Department (WVFD), which works closely with the College of the Siskiyous (COS) Fire Technology Department. According to the Weed General Plan Background Report, WVFD also maintains mutual and automatic aid agreements with CAL FIRE, Siskiyou County Fire Warden, Hammond Ranch Hose Company, Mt. Shasta Fire Department, and Lake Shastina Fire Department.

Police protection services and emergency response within the City are provided by the Weed Police Department. Other public services provided by the City include street maintenance and snow removal. The main public works facility is the City's Yard, located in the southern area of the City on Shastina Drive. City parks are operated by the Weed Recreation and Parks District, a special district that provides recreational programs and maintain recreational facilities in the City.

Although the proposed project would be provided with fire protection, police protection, emergency services, and other public services as necessary, the project demand would not result in a substantial impact on current level of service ratios or response times, and no new or physically altered governmental facilities are required. Because no new governmental facilities would need to be constructed and no existing facilities would need to be expanded, the project would have a less-than significant impact on public services.

Question C

The proposed project includes the renovation and expansion of existing buildings and construction of new buildings and structures on the COS campus. Potential impacts associated with the proposed improvements are discussed in applicable resource sections of this Initial Study. Where necessary, mitigation measures are included to ensure that impacts are less than significant. The proposed project would not result, either directly or indirectly, in an increase in population requiring additional schools, or the expansion of other existing schools in the City. Therefore, impacts would be less than significant.

CUMULATIVE IMPACTS

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

MITIGATION

None necessary.

DOCUMENTATION

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed October 2020.

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4.16 RECREATION

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project 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. Does the project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☒	☐

REGULATORY CONTEXT

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

LOCAL

City of Weed

The City's General Plan includes the following Goals, Objectives, Policies, and Programs related to recreation:

Open Space Element		
Goal	OS 1	A community with adequate park space and recreational programs.
Objective	OS 1.1	Preserve and expand parks and open space.
Policies	OS 1.1.1	Increase parks and open space to meet National Recreation and Park Association standards.
	OS 1.2.2	City parks and recreational facilities shall be universally accessible.
Programs	OS 1.1.1.1	Develop a capital improvement program for funding and phasing new public parks and recreation facilities.
	OS 1.1.1.4	Provide a diverse range of park types, functions, and recreational opportunities within parks.
Health Element		
Goal	HE 3	A community with access to parks and recreation.
Objectives	HE 3.1	Provide a comprehensive and integrated system of parks, plazas, playgrounds, trails, and open space.
	HE 3.2	Provide a diverse range of park types, functions, and recreational opportunities to meet the physical and social needs of the community.

	HE 3.3	Expand and tailor recreational programs and services to meet evolving community needs.
Policies	HE 3.1.1	The City shall maintain park facilities including playgrounds, fields, landscaped areas, trails, and amenities to encourage safe and active use.
	HE 3.2.1	Provide recreation programs to serve people of all incomes, cultural backgrounds, ages, and levels of physical capability.
	HE 3.3.1	Programs and services should remain accessible and relevant to today's residents, respond to unique cultural, historic, and social needs as well as changing demographics.
Program	HE 3.1.1.1	Create a Parks Maintenance Plan for all city-owned and operated parks, trails, landscapes, and greenways.

DISCUSSION OF IMPACTS

Questions A and B

On-campus student housing would increase population in the area and result in an increased demand for recreational facilities.

As noted above, the City-owned Bel Air Park and Weed Community Pool are located on College Avenue immediately north of the College of the Siskiyous (COS) campus. Although use of this park may increase as a result of additional students residing on campus, as described in Section 3.2, the project includes construction/installation of new recreational/athletic facilities on the COS campus. These improvements include a ±40,000-square-foot field house for indoor sports, a soccer field, a practice field, restroom facilities, and extension of the gymnasium building. Additionally, there is a disc golf course on the campus that is maintained by COS as well as passive recreational opportunities.

Because new on-campus recreational facilities would be constructed, and there are additional recreational opportunities on the campus property, it is not expected that any increased use of Bel Air Park that could result from implementation of the project would result in physical deterioration of the Park. In addition, the Community Pool would be open during the summer months when the student occupancy rate is expected to drop to 30 percent (COS, 2020). Therefore, the proposed project would have less-than-significant impacts on existing parks and recreational facilities. Further, implementation of applicable Mitigation Measures identified in Section 1.9 and compliance with applicable regulatory agency permit conditions ensures that impacts associated with construction of the proposed recreational facilities would be less than significant.

CUMULATIVE IMPACTS

Completion of the proposed project and other potential cumulative projects in the area, including growth resulting from build-out of the City's General Plan, could result in increased use of existing parks and recreational facilities or the need for new parks and recreational facilities.

All new development projects in the City are reviewed on a case-by-case basis to determine potential impacts on existing recreational facilities and/or the need for new facilities. Required improvements are constructed in accordance with local and State requirements, and any required mitigation measures are identified during the environmental review process to ensure that impacts are less than significant.

As documented above, the proposed project includes new sports and recreational facilities on the COS property, and adverse impacts on existing recreational facilities are not expected. The project must also comply with applicable mitigation measures identified in Section 1.9 and applicable regulatory agency

permit conditions. Therefore, the project's contribution toward cumulative impacts related to recreational facilities is less than significant.

MITIGATION

None necessary.

DOCUMENTATION

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed October 2020.

College of the Siskiyous. 2020. Personal communication, November 2020.

4.17 TRANSPORTATION

Would the project:

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

REGULATORY CONTEXT

FEDERAL

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

STATE

California Streets and Highways Code

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

LOCAL

Siskiyou County

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

City of Weed

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

Circulation Element		
Goal	CI 1	A safe and complete transportation network that is accessible to all users.
Objectives	CI 1.1	Establish a well-designed complete street network to accommodate multiple modes of transportation.
	CI 1.2	Achieve a 30 percent share of pedestrian travel by 2040.
	CI 1.3	Adopt a 10 percent share of bicycle travel by 2040.
Policies	CI 1.1.2	New development must locate parking behind the building when feasible to promote a walkable streetscape.
	CI 1.2.2	All sidewalks must be compliant with the Americans with Disabilities Act of 1990.
	CI 1.3.1	Establish a safe and complete bicycle transportation network.
Programs	CI 1.2.1.1	Adopt standards for safe pedestrian crossings and road segments that are consistent with traffic control devices in the manual for Uniform Traffic Control Devices (MUTCD).
	CI 1.2.1.3	Adopt a Safe Routes to School program that incorporated pedestrian safety measure near Weed Elementary School, Weed High School, and College of the Siskiyous.
	CI 1.2.2.1	Implement principles of universal design such as ADA accessible ramps, high-intensity activated crosswalk (HAWK) beacons, and tactile pavements at intersections.
	CI 1.2.2.2	Regulate the obstruction of sidewalks by trees, fire hydrants, poles, or other objects that may prevent mobility of people with disabilities.
	CI 1.3.1.4	Adopt a Safe Routes to School program that incorporates bicycle safety measures near Weed Elementary School, Weed High School, and College of the Siskiyous.

DISCUSSION OF IMPACTS

Questions A and B

The City's General Plan references the Level of Service (LOS) metric to identify potential impacts to the transportation system; however, as stated under Regulatory Context, as of July 1, 2020, traffic congestion is no longer considered a significant impact on the environment under the California Environmental Quality Act (CEQA). Transportation analyses under CEQA now focuses on reducing VMT by creating alternative transportation networks and promoting a mix of land uses that reduce the need to drive.

The City has not adopted thresholds of significance based on VMT. CEQA Guidelines §15064.3(b)(3) states that a lead agency may analyze a project's VMT qualitatively and evaluate factors such as the availability of transit, proximity to other destinations, and other factors that would reduce the need to drive. The qualitative analysis included in Section 4.8 (Greenhouse Gas Emissions) under Question A, demonstrates that the project promotes alternative transportation and mixed land uses. Specifically:

- The project includes construction of on-campus housing that would accommodate up to 396 students, thereby reducing VMT and operational emissions associated with mobile sources. This is also consistent with the City's plan for higher-density residential uses in the area to accommodate COS students.
- The existing on-campus pedestrian walkway system would be extended as needed to provide safe access to newly constructed buildings.
- Pedestrian walkways from College Avenue onto the COS campus would continue to be maintained.
- The campus is served by one County-operated bus line (STAGE), and there is an on-campus bus stop/shelter. Services include scheduled pick-up times throughout the day.
- COS will continue to work with the Siskiyou County Local Transportation Commission to coordinate RTPA's funding of a "free fare program" for public transit services for COS students.
- COS will continue to coordinate the Cooperative Agencies Resources for Education (CARE) and Extended Opportunity Programs and Services (EOPS) programs, which provide bus passes to disadvantaged students.
- COS will install bicycle parking in conjunction with new construction to promote the use of bicycles as an alternative means of transportation in accordance with CALGreen requirements.

Further, there would be short-term increases in VMT associated with construction workers and equipment. However, this is a temporary impact and would cease at completion of the improvements.

Alternative Transportation

The campus pedestrian walkway system is extensive and traverses the campus in multiple directions, providing COS students a footpath between classrooms. In addition, STAGE provides public transit services in the area, and there is an on-campus bus stop.

The proposed project would disrupt the use of walkways near buildings being constructed/renovated; however, construction would be temporary and alternative pathways to buildings would be available. No long-term adverse effects on pedestrian or bicycle facilities are anticipated.

Although a temporary increase in traffic associated with construction workers and equipment could interfere with the on-campus bus route, construction-related traffic would be minor due to the overall scale of the construction activities. Further, construction-related traffic would be spread over the duration of the construction schedule and would be minimal on a daily basis. Access to the bus stop would be maintained at all times, and no long-term adverse effects on public transit would occur.

As documented above, the project would not conflict with CEQA criteria for analyzing transportation impacts/VMT and would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts during construction would be temporary and cease at completion of the improvements. Therefore, impacts would be less than significant.

Question C

As documented herein, the addition of on-campus student housing would reduce VMTs and not result in a significant increase in average daily vehicle trips that could result in dangerous intersections in the project area. Further, the proposed project does not include any components that would permanently increase the potential for hazards due to a design feature or incompatible uses. Therefore, there would be no impact.

Question D

See discussion in Section 4.9 under Question F. The project would not result in inadequate emergency access; there would be no impact.

CUMULATIVE IMPACTS

As stated under Cumulative Impacts in Section 4.13 (Noise), in 2017, the City completed CEQA review for the proposed replacement of old water mains and installation of fire hydrants surrounding the campus site. Improvements for the City's project would occur in the public road ROW of College Avenue, Bel Air Avenue, Dollar Avenue, and Phelps Avenue; on City-owned property east of Bel Air Park, north of the Weed Community Pool; and in an alleyway east of Oregon Street and west of S. Weed Boulevard.

There is a possibility that construction periods for these projects may overlap and contribute to temporary cumulative transportation impacts. In the short-term, construction-related traffic would be minor due to the overall scale of the construction activities. In addition, temporary traffic control is required for all projects that require work in the public ROW to protect the travelling public and provide for emergency access. These measures ensure that the project's cumulative traffic impacts during construction are less than significant.

In terms of cumulative operational impacts, as discussed above, the County is not required to run a network travel demand model to estimate VMT. The 2016 Regional Transportation Plan for Siskiyou County calls for multi-modal transportation improvements in the County, and does not estimate a significant increase in VMT over the 20-year planning period; likewise, no significant cumulative impacts are identified in the IS/MND prepared for the Regional Transportation Plan. Therefore, because the project is consistent with CEQA criteria for analyzing transportation impacts and VMT, the project's cumulative transportation impacts would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Department of General Services, Division of the State Architect. 2018. Fire & Life Safety Site Conditions. https://www.documents.dgs.ca.gov/dgs/fmc/gs/dsa/DSA_810.pdf. Accessed January 2020.

_____. 2019. California Public Schools Fire and Life Safety FAQ. https://www.dgs.ca.gov/DSA/Resources/Page-Content/Resources-List-Folder/Fire-and-Life-Safety-Plan-Review. Accessed June 2020.

California Governor's Office of Planning and Research. 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed July 2020.

City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed October 2020.

Siskiyou County Local Transportation Commission. 2016. 2016 Regional Transportation Plan for Siskiyou County. https://siskiyoucountyrtp.files.wordpress.com/2016/04/siskiyou-rtp.pdf. Accessed September 2020.

_____. 2016. Initial Study / Negative Declaration for the Siskiyou County 2016 Regional Transportation Plan. https://siskiyoucountyrtp.files.wordpress.com/2016/04/enviro-doc1.pdf. Accessed September 2020.

4.18 TRIBAL CULTURAL RESOURCES

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

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. A resource listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 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 PRC section 5024.1(c)? In applying the criteria set forth in PRC Section 5024.1(c), the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

REGULATORY CONTEXT

FEDERAL

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

STATE

California Environmental Quality Act

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

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

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

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

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

In addition, a cultural landscape that meets one of these criteria is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. A historical resource described in §21084.1, a unique archaeological resource as defined in §21083.2(g), or a "nonunique archaeological resource" as defined in §21083.2(h) may also be a tribal cultural resource if it meets one of these criteria.

LOCAL

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

DISCUSSION OF IMPACTS

Questions A and B

As stated in Section 1.8, the Karuk Tribe previously requested that the College of the Siskiyous (COS) provide formal notification of proposed projects in the area. On December 23, 2020, written notification was sent by COS to the Karuk Tribe, along with a project description and maps depicting the proposed improvements. COS will continue the consultation process with the Karuk Tribe as necessary through to adoption of the MND.

In addition, as part of the cultural resources study for the project, ENPLAN obtained a list of local Native American contacts from the Native American Heritage Commission. Letters soliciting input were sent to all of the contacts; follow-up telephone calls or emails were also attempted. No responses were received. (See discussion in Section 4.5 under Question A and B).

In addition, an Archaeological Survey Report was prepared for the Timber Harvesting Plan by Dustin Lindler, Registered Professional Forester. Mr. Lindler's study also included consultation with Native American tribes on the California Department of Forestry (CDF) contact list, including the Karuk Tribe. Written notification was sent to all of the tribes on the CDF contact list on September 10, 2020, and no responses were received.

Therefore, because **Mitigation Measures 4.5.1** through **4.5.3** address the inadvertent discovery of cultural resources, and COS will continue the consultation process as necessary and identify any additional measures to address concerns of the Karuk Tribe, impacts would be 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 Public Resources Code §21084.3. Given the non-renewable nature of tribal cultural resources, any impact to tribal cultural sites, features, places, landscapes or objects could be considered cumulatively considerable. As discussed above, no cultural resources of significance to a California Native American tribe were identified within the project area. In addition, **Mitigation Measures 4.5.1** through **4.5.3** address the inadvertent discovery of cultural resources, and COS will continue consultation with the Karuk Tribe as necessary through to adoption of the MND; therefore, the proposed project would have less than significant cumulative impacts to tribal cultural resources.

MITIGATION

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

DOCUMENTATION

ENPLAN. 2020. Cultural Resources Inventory Report. College of the Siskiyous Facility Master Plan Update; Weed, Siskiyou County, California. Prepared for College of the Siskiyous. 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 stormwater 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

FEDERAL

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

STATE

Senate Bill 610 (2001)

Under SB 610, enacted in 2001, water supply assessments must be included in any environmental documentation for certain projects that are subject to CEQA. As stated in Water Code §10912(b), *"[if] a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections…"* Water Code §10910(c)(4) states that the water supply assessment for the project shall include a discussion with regard to whether the City's water supply during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses.

California Integrated Waste Management Act

The California Integrated Waste Management Act (CIWMA) of 1989, as amended, was enacted to reduce, recycle, and reuse solid waste generated in the State. The CIWMA requires cities and counties to divert 50 percent of the total waste stream from landfill disposal. Under the CIWMA, cities and counties must prepare Solid Waste Management Plans and Source Reduction and Recycling Elements to implement CIWMA goals.

Solid Waste Reuse and Recycling Access Act

The Solid Waste Reuse and Recycling Act of 1991 (AB 1327) requires that cities and counties adopt regulations that require commercial, industrial, or institutional buildings, and multifamily residential dwellings of five units or more, to provide adequate storage areas for the collection of recyclable materials.

Assembly Bill 341 (2011)

AB 341, enacted in 2011, established a statewide goal that 75 percent of solid waste be reduced, recycled, or composted by 2020. AB 341 established a statewide mandatory commercial recycling program. A business or public entity that generates four cubic yards or more of commercial solid waste per week, or a multifamily residential dwelling of five units or more, must arrange for recycling services no later than July 1, 2012. Cities and Counties are required to implement a commercial solid waste recycling program to meet this requirement.

Assembly Bill 1826 (2014)

AB 1826, enacted in 2014, requires businesses to recycle their organic waste (food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste), depending on the amount of waste generated per week. Local jurisdictions are required to implement an organic waste recycling program to divert organic waste generated by businesses, including multi-family dwellings of five or more units (multi-family dwellings are not required to have a food waste diversion program). Exemptions are allowed for jurisdictions in rural areas.

Senate Bill 1383 (2016)

SB 1383, enacted in 2016 established targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from 2014 levels by 2020 and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

California Building Standards Code

Title 24 of the California Code of Regulations (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 CALGreen Code, included as Part 11 of the CBSC, includes requirements for construction waste reduction, disposal, and recycling. The intent of this requirement is to reduce the amount of waste from new construction and demolition that would be sent to landfills, and to encourage reuse and recycling of construction waste products (e.g., carpet, wood, aggregate, shingles, wallboard, and other materials that have recyclable value). A minimum of 65 percent of nonhazardous construction and demolition waste must be recycled and/or salvaged for reuse. The CALGreen Code requires that a Construction Waste Management Plan be submitted with the Division of the State Architect project application and approved by a Division of the State Architect (DSA) certified project inspector prior to issuance of a certification of construction.

The CALGreen Code also includes mandatory water conservation measures for both indoor and outdoor water use. Indoor measures require the use of water conserving plumbing fixtures and fittings. Outdoor measures require that landscape areas in excess of 500 square feet comply with the California Department of Water Resources Model Water Efficiency Landscape Ordinance (MWELO), or a local water efficient landscape ordinance that is at least as effective as the State's MWELO. The MWELO is intended to reduce outdoor water use by requiring more efficient irrigation systems, graywater usage, and onsite stormwater capture, and by limiting the portion of landscapes that can be covered in turf.

LOCAL

City of Weed General Plan

The City's General Plan includes the following Goals, Objectives, Policies, and Programs related to utilities and service systems:

Public Facilities Element		
Goals	PF 1	A community with high quality water and sewer services provided in the most efficient cost effective and environmentally friendly manner.
	PF 3	A community with adequate waste handling and disposal.
	PF 4	A community that generates a minimal amount of waste.
Objectives	PF 1.1	Manage a reliable water supply with high quality water.

	PF 1.3	Maintain an efficient and complete sewer treatment system.
	PF 3.1	Maintain high quality, efficient, and cost-effective waste collection and disposal services.
	PF 4.1	Divert the maximum amount of materials from disposal.
Policies	PF 1.1.2	The City shall strive to maintain adequate water capacity for residents and businesses. New development should only be permitted when water services can be provided without threatening the level of service to the rest of the City.
	PF 1.3.1	The City shall undertake an assessment of all sewer treatment system facilities and distribution network maintained by the City.
	PF 3.1.2	The City shall undertake an assessment of all water collection and disposal services contracted by the City.
	PF 4.1.1	The City shall promote the reduction, reuse, and recycling of solid waste.
	PF 4.1.2	The City shall require construction sites to provide for the reuse, recycling, or salvage of construction materials, where feasible.
Programs	PF 1.3.1.1	Implement a program to assess the level of service for the sewer treatment system.
	PF 3.1.2.1	Conditionally approve new development that has proof of adequate solid waste collection, disposal, and diversion/recycling resources.
	PF 4.1.1.1	Establish composting programs for residential and commercial activities.

DISCUSSION OF IMPACTS

Question A

There are presently four wells on the campus property that provide a total well capacity exceeding 300 gallons per minute (GPM). The groundwater is used to geothermally cool campus buildings, and is then distributed as irrigation water. The College of the Siskiyous (COS) receives potable water and water for fire protection from the City of Weed. The City installed new water mains and fire hydrants throughout the campus about five years ago. In addition, in 2017, the City completed California Environmental Quality Act (CEQA) review for the proposed replacement of old water mains and installation of fire hydrants surrounding the campus site to ensure reliable water service and fire flows in the area. Improvements for the City's project would occur in the public road right-of-way (ROW) of College Avenue, Bel Air Avenue, Dollar Avenue, and Phelps Avenue; on City-owned property east of Bel Air Park, north of the Weed Community Pool; and in an alleyway east of Oregon Street and west of S. Weed Boulevard.

The COS campus is also connected to the City's public sewer system. On-site sewer lines, lift stations, and a sewage grinding station are maintained by the College. COS maintains an on-site storm drain system consisting of subsurface pipes and open ditches; most runoff is directed to undeveloped portions of the campus, where it percolates to groundwater.

Electricity for the campus is provided by PacifiCorp/Pacific Power. The campus electrical distribution system can be fed from two directions, providing redundancy in service. The primary service supplies a new substation near the cafeteria. Another primary line runs from the northwestern corner of the site to transformers adjacent to the greenhouse and football stadium.

Utilities would be extended as necessary to provide service to the newly constructed buildings. All improvements would occur within the boundaries of the study area. Potential impacts associated with site development, including installation of utilities, are discussed in applicable resource sections of this Initial Study. Where necessary, mitigation measures are included to ensure that impacts are less than significant. The City's water supply is not currently treated, with the exemption of the emergency back-up source from the Gazelle Well. As discussed under Question C, the project does not require expansion of wastewater treatment facilities. The proposed solar field would offset much or all of the new electrical demand associated with the proposed facilities. Therefore, impacts associated with construction/installation of infrastructure would be less than significant.

Question B

Water supply in the City of Weed is provided from a combination of spring water and groundwater. Beaughan Springs has been the principal water supply for north Weed for the last ±100 years. On June 30, 1966, the City entered into a 50-year agreement with International Paper Company for two cubic feet per second (CFS) (or 1.29 million gallons per day [MGD]) of water from Beaughan Springs. Roseburg Forest Products retains current ownership of the springs. This agreement expired on June 30, 2016. Although an annual lease agreement has since been signed for continued use of the springs until 2026 (including an optional 5-year extension for use until 2031), the agreement limits the City's water usage to 1.5 CFS (0.97 MGD) per year. No treatment is necessary for the spring water. Due to the uncertainty of water supply for the north Weed area, the City is exploring options for an additional water source. Potential alternatives include developing new production wells in north Weed, developing City-owned spring and/or surface water sources, and developing non-City-owned surface water sources.

Potable water for the proposed project is provided by groundwater sources in the south Weed area. These sources include the Mazzei Well and the South Weed Well. Under typical operations, no treatment is necessary for these two wells. A third well, the Gazelle Well, is used only as a backup source due to issues with taste and odor. When the Gazelle Well is utilized, the discharge is chlorinated near the wellhead. According to the Final Environmental Impact Report (FEIR) for the City's 2040 General Plan, the capacity of the Mazzei Well is 0.96 MGD. The emergency back-up supply from the Gazelle Well is 0.72 MGD. The General Plan FEIR states that the City-wide water use was projected to be 1.61 MGD in 2013; however, population following the 2014 Boles Fire declined, as did water use.

According to the California Department of Finance, the City's population in 2005 was about 2,946, and there were 1,256 housing units in the City. As of January 1, 2015, following the Boles Fire, the City's population was 2,655 and there were about 1,125 housing units. As of January 1, 2020, the City's population was about 2,747 and there were 1,181 housing units.

The FEIR states that the City has sufficient water supply to serve existing entitlements and resources; however, additional sources are needed to accommodate future growth in the City. To that end, in 2016, the South Weed Well was installed to provide additional water supply. The City now has more than ample water capacity in south Weed, but limited ability to convey the water to north Weed use areas.

During normal and dry years, the City has sufficient water supplies available to serve the proposed project and other developments in the City. During multiple dry years, Beaughan Spring and the City's groundwater sources would be vulnerable to drought. Due to concerns with drought conditions, in 2015, the City adopted Municipal Code Chapter 14.02 (Water Shortage Emergency Provisions) to prevent the waste and unreasonable use of water and to promote water conservation. The City is also subject to State-adopted emergency water use reductions during prolonged drought. Further, as stated in the FEIR and identified under Regulatory Context above, the City's General Plan includes policies and programs to protect the City's water supply.

As stated in Section 3.2, the project includes demolition of existing buildings (over 33,000 square feet [SF]) that were constructed prior to adoption of the State's Energy Efficiency Standards in 1976 and prior to adoption of the CALGreen Code in 2007. New buildings totaling over 225,000 SF would be constructed over the life to the Facility Master Plan. The Initial Study prepared for the updated California Energy Efficiency Standards estimates that implementation of the 2019 Standards will decrease statewide water consumption by approximately 246 million gallons per year. The CALGreen Code also includes mandatory measures to reduce indoor and outdoor water use. Subsequent updates are expected to provide further reductions in water consumption.

Therefore, impacts would be less than significant because the City has enacted restrictions to promote water conservation, COS provides its own irrigation water using on-site wells, the project would be subject to State-adopted emergency water use reductions during prolonged drought, and new buildings would meet current Building Code standards and use less water than existing buildings.

Question C

The City operates and maintains two separate wastewater collection systems and treatment facilities and a single effluent disposal facility. The Weed system serves the northern areas in the City, and the Shastina system serves the southern areas of the City. The project would be served by the Shastina system.

The City's 2006 Master Sewer Plan Update prepared by PACE Engineering states that the existing Shastina Wastewater Treatment Facility consists of four stabilization lagoons that were constructed in 1961, as well as a headworks and flowmeter, effluent pump station, force main, and a land disposal system that was constructed in 1979. The effluent force main is intertied with the Weed wastewater treatment system and both plants utilize the joint force main and land disposal facilities.

The Shastina system average dry-weather flow (ADWF) was about 0.33 million gallons per day (MGD) (or 260 gallons per day per household equivalent (GPD/HE)) in 2006 and was projected to be 0.852 MGD in 2016 and 1.699 MGD at build-out of the General Plan. Average wet-weather flows were 0.465 MGD and were projected to be 1.19 MGD in 2016 and 2.38 MGD at build-out. Peak wet weather flows (PWWF) in 2006 were estimated at 1.4 MGD and were projected to be 3.2 MGD in 2016 and 5.47 at build-out.

The 2006 Master Sewer Plan projected that there would be about 3,144 HEs connected to the Shastina system in 2016 and 6,269 HEs at build-out of the General Plan. This reflects an increase of 2,014 HEs between 2006 and 2016 (1,175 HEs for single-family residential, 42 HEs for multi-family residential, and 797 HEs for commercial).

The 2006 Master Sewer Plan identifies improvements to the Shastina Wastewater Treatment Plant (WWTP) that are necessary to accommodate future growth in the south Weed area. The influent flowmeter needs to be replaced to accommodate projected 2016 PWWFs. In addition, based on the projected 10-year growth and corresponding ADWF of 0.852 MGD, it is necessary to add 45 new statis tube aerators to Lagoons 1, 2, and 3. Beyond the projected 10-year growth, it will be necessary to consider alternative aeration systems for Lagoon 1 to maximize oxygen transfer. The 2006 Master Sewer Plan acknowledged that the projected ten-year growth is unlikely to occur by 2016 and that recommended improvements could occur based on actual growth patterns.

As noted under Question B, population and residential growth in the City is less than projected in the 2006 Master Sewer Plan; however, there have been several commercial/industrial developments proposed in South Weed since 2006 (e.g., ARCO gasoline station, Wood River Farms Parcel Map-12 industrial lots, and Love's Travel Stop). If approved/constructed, developments such as these could use the available capacity of the City's wastewater treatment facilities. Although construction of large projects that could have a high demand for sewage treatment and disposal services is speculative, such growth combined with incremental development in accordance with the COS Master Facility

Plan over the next ten years could require improvements to the City's wastewater treatment facilities. **MM 4.19.1** requires that prior to submittal of construction plans to the DSA, COS shall confirm with the City that it has adequate capacity in its wastewater collection and treatment system to serve the proposed uses. Any future improvements and/or expansion to the City's wastewater collection and treatment system would be subject to subsequent CEQA review. Therefore, impacts would be less than significant with implementation of **MM 4.19.1**.

Questions D and E

As discussed under Regulatory Context above, the City is subject to the CIWMA, which requires the diversion of 50 percent of the total waste stream from landfill disposal. The City coordinates with Siskiyou County to implement CIWMA requirements. To satisfy the annual reporting requirement, the City submits an annual report to the Siskiyou County Integrated Solid Waste Management Regional Authority (ISWMRA) that identifies the City's efforts, and this information is submitted to the State by the ISWMRA.

According to the FEIR for the City's 2040 General Plan, the City generates roughly 219 tons of waste per month. Waste disposal services in the City are provided by a private company, and solid waste is transported to the Black Butte Transfer Station in the City of Mt. Shasta.

The Black Butte Transfer Station is permitted through the California Integrated Waste Management Board (CIWMB). The maximum permitted throughput is 100 tons per day. The Transfer Station is subject to periodic inspections by Siskiyou County to ensure compliance with the CIWMB permit. Although the transfer station occasionally reaches capacity and is unable to accept additional waste on certain days, waste and recycled materials can be disposed of at another transfer station in the County. The City partners with adjacent communities and the County of Siskiyou in recycling efforts to divert waste away from dumps.

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

According to the EIR prepared for the City's 2040 General Plan, new growth and infrastructure development in the City of Weed would increase the need for solid waste collection and disposal services. However, the Black Butte Transfer Station would not exceed capacity at build-out of the General Plan.

Construction Wastes

As discussed under Regulatory Context, the CALGreen Code requires that a Construction Waste Management Plan be submitted with the building permit application and approved prior to issuance of a building permit. Because a DSA-certified project inspector would ensure compliance through the plan check and inspection processes, impacts during construction are less than significant.

Operational Wastes

Solid waste generation rates for schools vary throughout the State. Some jurisdictions have based the calculation on square footage of the building; others have estimated waste generation based on number of students and/or number of employees.

CalEEMod also estimates solid waste generation based on CalRecycle data for individual land uses. According to CalEEMod, the project would generate ±182 tons of waste per year, or ± 0.5 tons per day. This represents 0.5% of the maximum throughput of 100 tons per day at the Black Butte Transfer Station, which is considered a less-than significant impact.

Compliance with City and State regulations pertaining to the disposal of solid waste ensures that the project's impacts are less than significant.

CUMULATIVE IMPACTS

Cumulative projects, including growth resulting from build-out of the City's General Plan, would result in the need for new utility infrastructure. There would also be an increased demand for potable water and wastewater treatment, and increased generation of solid waste.

All new development projects in the City are reviewed on a case-by-case basis to determine the need for new or expanded infrastructure improvements. Required improvements are constructed in accordance with local and State requirements, and any required mitigation measures are identified during the environmental review process to ensure that impacts are less than significant.

The City's Code of Ordinances provides water conservation regulations under Chapter 14.02 "Water Shortage Emergency Provisions", which outlines a list of prohibited actions to prevent the waste and unreasonable use of water. The City is also subject to State-adopted emergency water use restrictions during prolonged drought.

In addition, all development projects are required to comply with local and State regulations pertaining to solid waste disposal and recycling. The Black Butte Transfer Station is subject to periodic inspections by Siskiyou County to ensure compliance with the CIWMB permit.

Compliance with existing local and State regulations ensures that the proposed project's contribution to cumulative impacts to utility and service systems is less than significant.

MITIGATION

4.19.1 Prior to submittal of construction plans to the Department of the State Architect for any new development under the Facility Master Plan, College of the Siskiyous shall verify with the City of Weed that it has adequate capacity in its wastewater collection and treatment system to accommodate flows from the proposed use.

DOCUMENTATION

CalRecycle. 2019. Solid Waste Information System, Facility Information/Site Activities, Black Butte Transfer Station. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Index/4147. Accessed November 2020.

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PACE Engineering, Inc. 2006. City of Weed 2006 Master Sewer Plan Update.

4.20 WILDFIRE

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

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

REGULATORY CONTEXT

FEDERAL

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

STATE

California Department of Forestry and Fire Protection (CAL FIRE)

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

The fire hazard model considers wildland fuels (natural vegetation that burns during the wildfire); topography (fires burn faster as they burn up-slope); weather (fire burns faster and with more intensity when air temperature is high, relative humidity is low, and winds are strong); and ember production and movement (how far embers move and how receptive the landing site is to new fires). The model recognizes that some areas of California have more frequent and severe wildfires than other areas. The proposed project is not located in an SRA FHSZ.

California Building Standards Code

The California Building Standards Code (CBSC) consists of 13 parts, including the California Building Code, Energy Code, Fire Code, and Green Building Standards Code. Part 9 of the CBSC is the California Fire Code (CFC) that contains regulations relating to construction and maintenance of buildings, the use of premises, and the management of WUI areas, among other issues.

The California Fire Code is updated every three years by the California Building Standards Commission and was last updated in 2019 (adopted January 1, 2020). The Fire Code sets forth relating to construction, maintenance, and use of buildings. The regulations address building standards, fire protection and notification systems, fire protection devices such as fire extinguishers and smoke alarms, high-rise building standards, and fire suppression training, fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards, hazardous materials storage and use, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. Development under the project would be subject to applicable regulations of the California Fire Code.

In the case of structures proposed by COS, the Division of State Architect (DSA) is responsible for ensuring compliance with the California Fire Code. This is done through the DSA's fire and life safety plan review. DSA requires the design professional to provide information addressing fire and life safety at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings; the DSA review also addresses fire department emergency vehicle access and fire suppression water supply.

LOCAL

City of Weed

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

Safety Element		
Goal	SF 3	A community protected from natural and manmade hazards.
Objective	SF 3.3	Protect property and life from fire hazards.
Policies	SF 3.3.1	Identify and maintain emergency evacuation routes.
	SF 3.3.2	Promote the use of defensible space to reduce the risk of structure fires.
Programs	SF 3.3.1.1.	Decline approval for proposed development not located within a five-minute response time of a fire station, unless acceptable mitigation measures are provided.
	SF 3.3.1.2	Require that all new development be provided with sufficient fire flow facilities at the time of permit issuance.
	SF 3.3.2.1	Collaborate with the City of Weed Volunteer Fire Department to develop and implement an effective and environmentally sound weed abatement program.
	SF 3.3.2.1	Utilize CAL FIRE's "defensible space" standards and recommendations.

DISCUSSION OF IMPACTS

According to Fire Hazard Severity Zones (FHSZ) maps prepared by CAL FIRE, the project site is located in a Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ) in a Local Responsibility Area (LRA).

Question A

See Section 4.9, Question F, for a discussion of potential construction-related impacts. Emergency access to the site would be provided by the main campus entrance from College Avenue and a driveway off of Siskiyou Way. Emergency access is also available via an unpaved road intersecting College Avenue west of the main campus entrance and extending to the tactical and emergency

services training facilities. The proposed project does not involve a use or activity that could interfere with long-term emergency response of emergency evacuation plans for the area.

As discussed under Regulatory Context, the Division of the State Architect would review all proposed project designs. Pursuant to the DSA's conditions for approval, a Fire and Life Safety Plan Review is required to prevent impairment of or physical interference with an adopted emergency response plan or emergency evacuation plan. According to the DSA, the design professional must contact local fire authorities in the area to obtain information pertaining to fire hazards and water supply availability. The local fire authority is responsible for reviewing proposed access roads, fire lane markings, fire hydrant locations, water supply requirements for fire flow, etc.

These requirements ensure that the proposed project would not interfere with emergency response vehicles or an emergency evacuation plan; therefore, there would be no impact.

Question B

While the project site is located in a Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ), it is bound by expanses of heavily vegetated open space to the northwest, west, southwest, south, and southeast, which increases the risk of wildfire. Additionally, the entire City of Weed is surrounded by Very High Fire Hazard Severity Zones (VHFHSZ).

The project site itself is relatively flat, but steep slopes are located immediately south of the project site. Slope is important relative to wildfire, because steeper slopes typically facilitate more rapid-fire spread upslope and slower spread downslope. The project site is situated such that the control of a fire originating in the vicinity could present difficult fire-fighting actions because of the steep slope to the south, fire-prone vegetation, dry weather, high wind, or any combination of these conditions.

However, given that the project site is already developed and the project itself is subject to the provisions of the California Code of Regulations, Title 24, Part 9 (California Fire Code), and Part 2 (California Building Code), the project would not significantly increase the need for fire protection and would not exacerbate wildfire risks. While the project is not required to comply with CBC Chapter 7A (Materials and Construction Methods for Exterior Wildfire Exposure), the project is subject to DSA's Fire and Life Safety code compliance program. The program addresses the safety of occupants in buildings, as related to fire-resistive building materials, fire alarms, fire suppression equipment, safe occupant egress, and firefighting equipment access. DSA assumes responsibility from the State Fire Marshall for ensuring Fire and Life Safety code compliance.

Therefore, it is not anticipated that the project would exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; this impact would be less than significant.

Question C

As discussed in Section 4.9 under Question G, equipment used during construction activities may create sparks that could ignite dry grass or other fuels. Also, the use of power tools and/or acetylene torches may increase the risk of wildland fire hazard. However, the CFC includes requirements that must be followed during construction, including Chapter 33 (Fire Safety during Construction and Demolition) and Chapter 35 (Welding and Other Hot Work).

The proposed project would not require installation of infrastructure that could exacerbate fire hazards (e.g., power lines in vegetated areas); would not construct roads or otherwise intrude into natural spaces in a manner that would increase wildlife hazards in the long term; and would not require installation of emergency water sources or other fire prevention/suppression infrastructure. Therefore, the increased risk of fire due to project infrastructure and the potential for ongoing impacts due to fire-related infrastructure are less than significant.

Question D

As stated under Question B, the project site itself is relatively flat, but steep slopes are located immediately south of the project site. Development associated with the project would place some of the new uses near the slope. However, there are no significant streams or drainages on the slope and a sufficient buffer will remain between the slope and the buildings. Therefore, project implementation would not expose people or structures to significant risks due to post-fire flooding or landslides.

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 addition, the proposed project would not contribute individually or cumulatively to increased risks associated with post-fire hazards. While the project site is not located within a High Fire Hazard Severity Zone, the proposed project is subject to State Building and Fire Codes that address fire risks. Likewise, all new construction in the surrounding areas is required to comply with State Building and Fire Codes that were adopted to protect life and property from wildfire risks. Therefore, the project's cumulative impact to increased risks of wildfire would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Building Standards Code. 2019. Part 1 California Administrative Code. https://codes.iccsafe.org/content/CAAC2019/group-1-safety-of-construction-of-public-schools. Accessed January 2020.

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City of Weed. 2017. City of Weed 2040 General Plan. https://www.ci.weed.ca.us/index.asp?SEC=EC3DD86C-B74C-4E4C-80EE-2149126F86DE&DE=46B2EDA6-AD54-492F-8544-62033B1B424E&Type=B_BASIC. Accessed October 2020.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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 section above, the proposed project would result in conversion of timberland to non-forest use, could potentially affect wetlands or other sensitive habitats, disturb nesting birds (if present), adversely affect historical, cultural, and tribal cultural resources (if present), contribute to the need for additional wastewater treatment capacity, result in the introduction and spread of noxious weeds during construction, temporarily increase air emissions, and temporarily increase noise and vibration levels. However, mitigation measures are included to reduce all potential impacts to a less-than-significant level.

Question B

The potential cumulative impacts of the proposed project have been analyzed within the discussion of each environmental resource area above. The mitigation measures identified in Section 1.9 reduce all potential impacts to a less-than-significant level.

Question C

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

SECTION 5.0 LIST OF PREPARERS

ENPLAN

Donald Burk ..... Environmental Services Manager

Carla L. Thompson, AICP ..... Senior Environmental Planner

Allison Loveless ..... Environmental Scientist

Jacques Peltier ..... Archaeologist

Kiara Cuerpo-Hadsall ..... Environmental Planner

Sabrina Hofkin ..... Wildlife Biologist

College of the Siskiyous

Stephen Schoonmaker, Ed.D. ..... Superintendent/President

Darlene Melby, MBA ..... Vice President of Administrative Services

Veronica A. Rivera ..... Director of Facilities and Maintenance

SECTION 6.0 ABBREVIATIONS AND ACRONYMNS

AB	Assembly Bill
APCD	Air Pollution Control District
APE	Area of Potential Effects
AQMD	Air Quality Management District
ASF	Assignable Square Footage
BMP	Best Management Practice
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	Criteria Air Pollutants
CARB	California Air Resources Board
CASGEM	California Statewide Groundwater Elevation Monitoring
CBC	California Building Code
CBSC	California Building Standards Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	Methane
CIWMA	California Integrated Waste Management Act
CIWMB	California Integrated Waste Management Board
CNDDB	California Natural Diversity Data Base
CO	Carbon Monoxide
COS	College of the Siskiyous
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
dBA	Decibels

DSA	Division of the State Architect
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
EO	Executive Order
ESA	Environmental Site Assessment
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Act
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FMMP	Farmland Mapping and Monitoring Program
GC	Government Code
GHG	Greenhouse Gas Emissions
GPM	Gallons per Minute
GSP	Groundwater Sustainability Plans
GWP	Global Warming Potential
H_2S	Hydrogen Sulfide
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
HMP	Hazard Mitigation Plan
HSC	California Health and Safety Code
IBC	International Building Code
ISWMRA	Integrated Solid Waste Management Regional Authority
IS	Initial Study
I-5	Interstate 5
LRA	Local Responsibility Area
MACT	Maximum Achievable Control Technology
MCL	Maximum Contaminant Level
MG	Million Gallons
MGD	Million Gallons per Day
mg/m^3	Milligrams per Cubic Meter
MND	Mitigated Negative Declaration
MPH	Miles per Hour
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MBTA	Migratory Bird Treaty Act
MWELO	Model Water Efficiency Landscape Ordinance

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/California Historical Resources Information System
NEPA	National Environmental Policy Act
NF_3	Nitrogen Trifluoride
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
N_2	Nitrogen
N_2O	Nitrous Oxide
NO	Nitric Oxide
NOI	Notice of Intent
NO_2	Nitrogen Dioxide
NO_X	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPA	California Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTMP	Non-Industrial Timber Management Plan
NWP	Nationwide Permit
O_2	Oxygen
O_3	Ozone
OHWM	Ordinary High Water Mark
OSHA	Occupational Safety and Health Act
Pb	Lead
PFC	Perfluorocarbons
$PM_{2.5}$	Particulate Matter, 2.5 microns in size
PM_{10}	Particulate Matter, 10 microns in size
PPB	Parts per Billion
PPM	Parts per Million
PRC	Public Resources Code
PV	Photovoltaic
PVC	Polyvinyl Chloride
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
ROG	Reactive Organic Gases
ROW	Right-of-Way

RPF	Registered Professional Forester
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAPCD	Siskiyou County Air Pollution Control District
SCS	Sustainable Communities Strategy
SF	Square Feet
SF_6	Sulfur Hexafluoride
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SMARA	The Surface Mining and Reclamation Act
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
SRA	State Responsibility Area
STAGE	Siskiyou Transit and General Express
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TCP	Timberland Conversion Permit
THP	Timber Harvesting Plan
TPH	Total Petroleum Hydrocarbons
TPZ	Timberland Production Zone
U.S.	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VMT	Vehicle Miles Traveled
WDRs	Waste Discharge Requirements
WVFD	Weed Volunteer Fire Department
$\mu g/m^3$	Micrograms per Cubic Meter

APPENDIX A

CALEEMOD AIR QUALITY/GREENHOUSE GAS EMISSIONS OUTPUT FILES

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College of the Siskiyous Master Plan

Siskiyou County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	96.19	1000sqft	2.21	96,190.00	0
Unrefrigerated Warehouse-No Rail	0.86	1000sqft	0.02	860.00	0
Other Non-Asphalt Surfaces	435.60	1000sqft	10.00	0.00	0
Parking Lot	64.35	1000sqft	1.48	0.00	0
Apartments Mid Rise	124.00	Dwelling Unit	0.74	96,800.00	355

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	85
Climate Zone	14			**Operational Year**	2026
Utility Company	PacifiCorp				
CO2 Intensity (lb/MWhr)	1656.39	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Reflects all project phases. Residential- 124-unit student housing (396 beds). Population adjusted to reflect annual average vacancy rate per COS estimates. Lot acreage adjusted to reflect building footprints. Industrial use=garage (vehicle storage).

Construction Phase - Construction schedule would change based on available construction funding.

Off-road Equipment - .

Off-road Equipment - .

Off-road Equipment - .

Off-road Equipment - .

Trips and VMT - Project would be constructed in phases as funding becomes available.

Demolition -

Architectural Coating - .

Vehicle Trips - Trip rate adjusted to account for on-site student housing and uses that would not generate trips over existing conditions. Reflects projections for student population and employees at build-out of the Master Plan.

Woodstoves - .

Area Coating - .

Energy Use -

Water And Wastewater - Adjusted to reflect replacement of old buildings with new buildings constructed in accordance with State regulations for water conservation and energy efficiency.

Solid Waste - No solid waste generation associated with Emergency Services Training garage,

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	0.00	3,217.00
tblAreaCoating	Area_Parking	0	3217

College of the Siskiyous Master Plan - Siskiyou County APCD Air District, Summer

tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	271.00
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	PhaseEndDate	11/11/2022	10/28/2022
tblConstructionPhase	PhaseEndDate	7/23/2021	8/20/2021
tblConstructionPhase	PhaseEndDate	6/11/2021	7/9/2021
tblConstructionPhase	PhaseStartDate	10/15/2022	10/15/2021
tblConstructionPhase	PhaseStartDate	6/12/2021	7/12/2021
tblFireplaces	NumberGas	68.20	0.00
tblFireplaces	NumberNoFireplace	12.40	0.00
tblFireplaces	NumberWood	43.40	0.00
tblGrading	AcresOfGrading	71.25	10.00
tblLandUse	LandUseSquareFeet	435,600.00	0.00
tblLandUse	LandUseSquareFeet	64,350.00	0.00
tblLandUse	LandUseSquareFeet	124,000.00	96,800.00
tblLandUse	LotAcreage	3.26	0.74
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00

tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.81	0.00
tblTripsAndVMT	WorkerTripLength	16.80	14.00
tblTripsAndVMT	WorkerTripLength	16.80	14.00
tblTripsAndVMT	WorkerTripLength	16.80	14.00
tblTripsAndVMT	WorkerTripLength	16.80	14.00
tblTripsAndVMT	WorkerTripLength	16.80	14.00
tblTripsAndVMT	WorkerTripLength	16.80	14.00
tblTripsAndVMT	WorkerTripNumber	20.00	15.00
tblVehicleTrips	HO_TL	7.90	3.00
tblVehicleTrips	HO_TTP	38.10	50.00
tblVehicleTrips	HS_TL	7.10	5.50
tblVehicleTrips	HS_TTP	19.60	10.00
tblVehicleTrips	HW_TL	16.80	5.50
tblVehicleTrips	HW_TTP	42.30	40.00
tblVehicleTrips	ST_TR	6.39	3.44
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	5.86	3.44
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	6.65	3.44
tblVehicleTrips	WD_TR	27.49	3.28
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	8,079,099.18	7,271,189.10
tblWater	IndoorWaterUseRate	4,718,026.44	4,246,223.80
tblWater	IndoorWaterUseRate	198,875.00	0.00
tblWater	OutdoorWaterUseRate	5,093,345.13	0.00

tblWater	OutdoorWaterUseRate	7,379,477.25	0.00
tblWoodstoves	NumberCatalytic	6.20	0.00
tblWoodstoves	NumberNoncatalytic	6.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	23.0555	61.3700	51.6373	0.1048	15.9996	2.6732	17.7344	8.7402	2.4784	10.3362	0.0000	10,208.9604	10,208.9604	2.4279	0.0000	10,269.6570
2022	22.7539	20.3120	26.0583	0.0545	1.8386	0.8818	2.7204	0.4917	0.8344	1.3261	0.0000	5,333.9509	5,333.9509	0.7490	0.0000	5,352.6767
Maximum	**23.0555**	**61.3700**	**51.6373**	**0.1048**	**15.9996**	**2.6732**	**17.7344**	**8.7402**	**2.4784**	**10.3362**	**0.0000**	**10,208.9604**	**10,208.9604**	**2.4279**	**0.0000**	**10,269.6570**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	23.0555	61.3700	51.6373	0.1048	7.3052	2.6732	9.0400	3.9610	2.4784	5.5570	0.0000	10,208.9604	10,208.9604	2.4279	0.0000	10,269.6570
2022	22.7539	20.3120	26.0583	0.0545	1.8386	0.8818	2.7204	0.4917	0.8344	1.3261	0.0000	5,333.9509	5,333.9509	0.7490	0.0000	5,352.6767
Maximum	**23.0555**	**61.3700**	**51.6373**	**0.1048**	**7.3052**	**2.6732**	**9.0400**	**3.9610**	**2.4784**	**5.5570**	**0.0000**	**10,208.9604**	**10,208.9604**	**2.4279**	**0.0000**	**10,269.6570**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**48.74**	**0.00**	**42.51**	**51.77**	**0.00**	**40.98**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.9170	0.1183	10.2813	5.4000e-004		0.0569	0.0569		0.0569	0.0569	0.0000	18.5511	18.5511	0.0180	0.0000	19.0006
Energy	0.0760	0.6827	0.5230	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.5333	828.5333	0.0159	0.0152	833.4569
Mobile	2.9502	26.2384	24.9376	0.1259	6.8911	0.0808	6.9719	1.8457	0.0757	1.9214		12,907.4901	12,907.4901	0.7647		12,926.6065
Total	**8.9431**	**27.0394**	**35.7418**	**0.1306**	**6.8911**	**0.1902**	**7.0813**	**1.8457**	**0.1851**	**2.0308**	**0.0000**	**13,754.5746**	**13,754.5746**	**0.7985**	**0.0152**	**13,779.0640**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.9170	0.1183	10.2813	5.4000e-004		0.0569	0.0569		0.0569	0.0569	0.0000	18.5511	18.5511	0.0180	0.0000	19.0006
Energy	0.0760	0.6827	0.5230	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.5333	828.5333	0.0159	0.0152	833.4569
Mobile	2.8512	25.4705	23.0058	0.1162	6.1400	0.0730	6.2130	1.6445	0.0684	1.7130		11,912.9544	11,912.9544	0.7413		11,931.4865
Total	**8.8441**	**26.2714**	**33.8100**	**0.1208**	**6.1400**	**0.1824**	**6.3224**	**1.6445**	**0.1778**	**1.8224**	**0.0000**	**12,760.0389**	**12,760.0389**	**0.7752**	**0.0152**	**12,783.9441**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.11**	**2.84**	**5.40**	**7.47**	**10.90**	**4.07**	**10.72**	**10.90**	**3.93**	**10.26**	**0.00**	**7.23**	**7.23**	**2.93**	**0.00**	**7.22**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/3/2021	5/28/2021	5	20	
2	Site Preparation	Site Preparation	5/29/2021	7/9/2021	5	30	
3	Grading	Grading	7/12/2021	8/20/2021	5	30	
4	Building Construction	Building Construction	7/24/2021	9/16/2022	5	300	
5	Architectural Coating	Architectural Coating	10/15/2021	10/28/2022	5	271	
6	Paving	Paving	9/17/2022	10/14/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 11.48

Residential Indoor: 196,020; Residential Outdoor: 65,340; Non-Residential Indoor: 145,575; Non-Residential Outdoor: 48,525; Striped Parking Area: 3,217 (Architectural Coating – sqft)

OffRoad Equipment

College of the Siskiyous Master Plan - Siskiyou County APCD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	7.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	7.00	132	0.36
Paving	Rollers	2	7.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	149.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	15.00	0.00	0.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	130.00	29.00	0.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	26.00	0.00	0.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.6091	0.0000	1.6091	0.2436	0.0000	0.2436			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**1.6091**	**1.5513**	**3.1605**	**0.2436**	**1.4411**	**1.6847**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0593	1.9346	0.2970	6.2800e-003	0.1306	6.6200e-003	0.1372	0.0358	6.3400e-003	0.0422		657.6946	657.6946	0.0301		658.4470
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1215	0.0796	0.8351	1.7000e-003	0.1597	1.4700e-003	0.1612	0.0424	1.3500e-003	0.0437		168.6589	168.6589	8.5800e-003		168.8734
Total	**0.1808**	**2.0142**	**1.1321**	**7.9800e-003**	**0.2903**	**8.0900e-003**	**0.2984**	**0.0782**	**7.6900e-003**	**0.0859**		**826.3535**	**826.3535**	**0.0387**		**827.3204**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7241	0.0000	0.7241	0.1096	0.0000	0.1096			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**0.7241**	**1.5513**	**2.2755**	**0.1096**	**1.4411**	**1.5507**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0593	1.9346	0.2970	6.2800e-003	0.1306	6.6200e-003	0.1372	0.0358	6.3400e-003	0.0422		657.6946	657.6946	0.0301		658.4470
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1215	0.0796	0.8351	1.7000e-003	0.1597	1.4700e-003	0.1612	0.0424	1.3500e-003	0.0437		168.6589	168.6589	8.5800e-003		168.8734
Total	**0.1808**	**2.0142**	**1.1321**	**7.9800e-003**	**0.2903**	**8.0900e-003**	**0.2984**	**0.0782**	**7.6900e-003**	**0.0859**		**826.3535**	**826.3535**	**0.0387**		**827.3204**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					15.8080	0.0000	15.8080	8.6894	0.0000	8.6894			0.0000			0.0000
Off-Road	3.3085	34.4871	17.3799	0.0317		1.7330	1.7330		1.5944	1.5944		3,074.4997	3,074.4997	0.9944		3,099.3586
Total	**3.3085**	**34.4871**	**17.3799**	**0.0317**	**15.8080**	**1.7330**	**17.5410**	**8.6894**	**1.5944**	**10.2837**		**3,074.4997**	**3,074.4997**	**0.9944**		**3,099.3586**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1458	0.0956	1.0022	2.0400e-003	0.1916	1.7600e-003	0.1934	0.0508	1.6200e-003	0.0524		202.3906	202.3906	0.0103		202.6481
Total	**0.1458**	**0.0956**	**1.0022**	**2.0400e-003**	**0.1916**	**1.7600e-003**	**0.1934**	**0.0508**	**1.6200e-003**	**0.0524**		**202.3906**	**202.3906**	**0.0103**		**202.6481**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1136	0.0000	7.1136	3.9102	0.0000	3.9102			0.0000			0.0000
Off-Road	3.3085	34.4871	17.3799	0.0317		1.7330	1.7330		1.5944	1.5944	0.0000	3,074.4997	3,074.4997	0.9944		3,099.3586
Total	**3.3085**	**34.4871**	**17.3799**	**0.0317**	**7.1136**	**1.7330**	**8.8466**	**3.9102**	**1.5944**	**5.5046**	**0.0000**	**3,074.4997**	**3,074.4997**	**0.9944**		**3,099.3586**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1458	0.0956	1.0022	2.0400e-003	0.1916	1.7600e-003	0.1934	0.0508	1.6200e-003	0.0524		202.3906	202.3906	0.0103		202.6481
Total	**0.1458**	**0.0956**	**1.0022**	**2.0400e-003**	**0.1916**	**1.7600e-003**	**0.1934**	**0.0508**	**1.6200e-003**	**0.0524**		**202.3906**	**202.3906**	**0.0103**		**202.6481**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8701	0.0000	4.8701	2.5208	0.0000	2.5208			0.0000			0.0000
Off-Road	3.6340	40.4964	26.7205	0.0538		1.7288	1.7288		1.5905	1.5905		5,214.8174	5,214.8174	1.6866		5,256.9819
Total	**3.6340**	**40.4964**	**26.7205**	**0.0538**	**4.8701**	**1.7288**	**6.5989**	**2.5208**	**1.5905**	**4.1113**		**5,214.8174**	**5,214.8174**	**1.6866**		**5,256.9819**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1215	0.0796	0.8351	1.7000e-003	0.1597	1.4700e-003	0.1612	0.0424	1.3500e-003	0.0437		168.6589	168.6589	8.5800e-003		168.8734
Total	**0.1215**	**0.0796**	**0.8351**	**1.7000e-003**	**0.1597**	**1.4700e-003**	**0.1612**	**0.0424**	**1.3500e-003**	**0.0437**		**168.6589**	**168.6589**	**8.5800e-003**		**168.8734**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1915	0.0000	2.1915	1.1344	0.0000	1.1344			0.0000			0.0000
Off-Road	3.6340	40.4964	26.7205	0.0538		1.7288	1.7288		1.5905	1.5905	0.0000	5,214.8174	5,214.8174	1.6866		5,256.9818
Total	**3.6340**	**40.4964**	**26.7205**	**0.0538**	**2.1915**	**1.7288**	**3.9203**	**1.1344**	**1.5905**	**2.7249**	**0.0000**	**5,214.8174**	**5,214.8174**	**1.6866**		**5,256.9818**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1215	0.0796	0.8351	1.7000e-003	0.1597	1.4700e-003	0.1612	0.0424	1.3500e-003	0.0437		168.6589	168.6589	8.5800e-003		168.8734
Total	**0.1215**	**0.0796**	**0.8351**	**1.7000e-003**	**0.1597**	**1.4700e-003**	**0.1612**	**0.0424**	**1.3500e-003**	**0.0437**		**168.6589**	**168.6589**	**8.5800e-003**		**168.8734**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8146	16.8013	15.9224	0.0260		0.9180	0.9180		0.8631	0.8631		2,471.9176	2,471.9176	0.5947		2,486.7847
Total	**1.8146**	**16.8013**	**15.9224**	**0.0260**		**0.9180**	**0.9180**		**0.8631**	**0.8631**		**2,471.9176**	**2,471.9176**	**0.5947**		**2,486.7847**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1465	3.3026	0.9215	8.5400e-003	0.1779	0.0122	0.1901	0.0512	0.0117	0.0629		891.8564	891.8564	0.0636		893.4475
Worker	1.0527	0.6901	7.2378	0.0147	1.3840	0.0127	1.3967	0.3670	0.0117	0.3788		1,461.7101	1,461.7101	0.0744		1,463.5695
Total	**1.1992**	**3.9927**	**8.1593**	**0.0233**	**1.5618**	**0.0250**	**1.5868**	**0.4183**	**0.0234**	**0.4417**		**2,353.5665**	**2,353.5665**	**0.1380**		**2,357.0170**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8146	16.8013	15.9224	0.0260		0.9180	0.9180		0.8631	0.8631	0.0000	2,471.9176	2,471.9176	0.5947		2,486.7847
Total	**1.8146**	**16.8013**	**15.9224**	**0.0260**		**0.9180**	**0.9180**		**0.8631**	**0.8631**	**0.0000**	**2,471.9176**	**2,471.9176**	**0.5947**		**2,486.7847**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1465	3.3026	0.9215	8.5400e-003	0.1779	0.0122	0.1901	0.0512	0.0117	0.0629		891.8564	891.8564	0.0636		893.4475
Worker	1.0527	0.6901	7.2378	0.0147	1.3840	0.0127	1.3967	0.3670	0.0117	0.3788		1,461.7101	1,461.7101	0.0744		1,463.5695
Total	**1.1992**	**3.9927**	**8.1593**	**0.0233**	**1.5618**	**0.0250**	**1.5868**	**0.4183**	**0.0234**	**0.4417**		**2,353.5665**	**2,353.5665**	**0.1380**		**2,357.0170**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6291	15.0372	15.7188	0.0260		0.7748	0.7748		0.7291	0.7291		2,472.8873	2,472.8873	0.5909		2,487.6595
Total	**1.6291**	**15.0372**	**15.7188**	**0.0260**		**0.7748**	**0.7748**		**0.7291**	**0.7291**		**2,472.8873**	**2,472.8873**	**0.5909**		**2,487.6595**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1347	3.1318	0.8330	8.4900e-003	0.1779	0.0108	0.1886	0.0512	0.0103	0.0615		886.4631	886.4631	0.0616		888.0033
Worker	0.9778	0.6121	6.4108	0.0142	1.3840	0.0121	1.3960	0.3670	0.0111	0.3782		1,410.9603	1,410.9603	0.0652		1,412.5898
Total	**1.1125**	**3.7439**	**7.2438**	**0.0227**	**1.5618**	**0.0228**	**1.5847**	**0.4183**	**0.0214**	**0.4397**		**2,297.4234**	**2,297.4234**	**0.1268**		**2,300.5931**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6291	15.0372	15.7188	0.0260		0.7748	0.7748		0.7291	0.7291	0.0000	2,472.8873	2,472.8873	0.5909		2,487.6595
Total	**1.6291**	**15.0372**	**15.7188**	**0.0260**		**0.7748**	**0.7748**		**0.7291**	**0.7291**	**0.0000**	**2,472.8873**	**2,472.8873**	**0.5909**		**2,487.6595**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1347	3.1318	0.8330	8.4900e-003	0.1779	0.0108	0.1886	0.0512	0.0103	0.0615		886.4631	886.4631	0.0616		888.0033
Worker	0.9778	0.6121	6.4108	0.0142	1.3840	0.0121	1.3960	0.3670	0.0111	0.3782		1,410.9603	1,410.9603	0.0652		1,412.5898
Total	**1.1125**	**3.7439**	**7.2438**	**0.0227**	**1.5618**	**0.0228**	**1.5847**	**0.4183**	**0.0214**	**0.4397**		**2,297.4234**	**2,297.4234**	**0.1268**		**2,300.5931**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.6123					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**19.8312**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2105	0.1380	1.4476	2.9400e-003	0.2768	2.5400e-003	0.2793	0.0734	2.3400e-003	0.0758		292.3420	292.3420	0.0149		292.7139
Total	**0.2105**	**0.1380**	**1.4476**	**2.9400e-003**	**0.2768**	**2.5400e-003**	**0.2793**	**0.0734**	**2.3400e-003**	**0.0758**		**292.3420**	**292.3420**	**0.0149**		**292.7139**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.6123					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**19.8312**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2105	0.1380	1.4476	2.9400e-003	0.2768	2.5400e-003	0.2793	0.0734	2.3400e-003	0.0758		292.3420	292.3420	0.0149		292.7139
Total	**0.2105**	**0.1380**	**1.4476**	**2.9400e-003**	**0.2768**	**2.5400e-003**	**0.2793**	**0.0734**	**2.3400e-003**	**0.0758**		**292.3420**	**292.3420**	**0.0149**		**292.7139**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.6123					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**19.8168**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1956	0.1224	1.2822	2.8400e-003	0.2768	2.4200e-003	0.2792	0.0734	2.2300e-003	0.0756		282.1921	282.1921	0.0130		282.5180
Total	**0.1956**	**0.1224**	**1.2822**	**2.8400e-003**	**0.2768**	**2.4200e-003**	**0.2792**	**0.0734**	**2.2300e-003**	**0.0756**		**282.1921**	**282.1921**	**0.0130**		**282.5180**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.6123					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**19.8168**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1956	0.1224	1.2822	2.8400e-003	0.2768	2.4200e-003	0.2792	0.0734	2.2300e-003	0.0756		282.1921	282.1921	0.0130		282.5180
Total	**0.1956**	**0.1224**	**1.2822**	**2.8400e-003**	**0.2768**	**2.4200e-003**	**0.2792**	**0.0734**	**2.2300e-003**	**0.0756**		**282.1921**	**282.1921**	**0.0130**		**282.5180**

3.7 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0167	10.2590	13.4789	0.0211		0.5219	0.5219		0.4801	0.4801		2,045.5172	2,045.5172	0.6616		2,062.0563
Paving	0.1939					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2106**	**10.2590**	**13.4789**	**0.0211**		**0.5219**	**0.5219**		**0.4801**	**0.4801**		**2,045.5172**	**2,045.5172**	**0.6616**		**2,062.0563**

3.7 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1128	0.0706	0.7397	1.6400e-003	0.1597	1.3900e-003	0.1611	0.0424	1.2800e-003	0.0436		162.8031	162.8031	7.5200e-003		162.9911
Total	**0.1128**	**0.0706**	**0.7397**	**1.6400e-003**	**0.1597**	**1.3900e-003**	**0.1611**	**0.0424**	**1.2800e-003**	**0.0436**		**162.8031**	**162.8031**	**7.5200e-003**		**162.9911**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0167	10.2590	13.4789	0.0211		0.5219	0.5219		0.4801	0.4801	0.0000	2,045.5172	2,045.5172	0.6616		2,062.0563
Paving	0.1939					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2106**	**10.2590**	**13.4789**	**0.0211**		**0.5219**	**0.5219**		**0.4801**	**0.4801**	**0.0000**	**2,045.5172**	**2,045.5172**	**0.6616**		**2,062.0563**

3.7 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1128	0.0706	0.7397	1.6400e-003	0.1597	1.3900e-003	0.1611	0.0424	1.2800e-003	0.0436		162.8031	162.8031	7.5200e-003		162.9911
Total	**0.1128**	**0.0706**	**0.7397**	**1.6400e-003**	**0.1597**	**1.3900e-003**	**0.1611**	**0.0424**	**1.2800e-003**	**0.0436**		**162.8031**	**162.8031**	**7.5200e-003**		**162.9911**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.8512	25.4705	23.0058	0.1162	6.1400	0.0730	6.2130	1.6445	0.0684	1.7130		11,912.9544	11,912.9544	0.7413		11,931.4865
Unmitigated	2.9502	26.2384	24.9376	0.1259	6.8911	0.0808	6.9719	1.8457	0.0757	1.9214		12,907.4901	12,907.4901	0.7647		12,926.6065

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	426.56	426.56	426.56	586,117	522,230
Junior College (2Yr)	315.50	1,080.21	116.39	962,825	857,877
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	742.06	1,506.77	542.95	1,548,941	1,380,107

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.50	5.50	3.00	40.00	10.00	50.00	86	11	3
Junior College (2Yr)	14.70	6.60	6.60	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	14.70	6.60	6.60	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.515293	0.032970	0.181452	0.104385	0.022189	0.004852	0.007938	0.122186	0.001094	0.001317	0.004629	0.000920	0.000775
Junior College (2Yr)	0.515293	0.032970	0.181452	0.104385	0.022189	0.004852	0.007938	0.122186	0.001094	0.001317	0.004629	0.000920	0.000775
Other Non-Asphalt Surfaces	0.515293	0.032970	0.181452	0.104385	0.022189	0.004852	0.007938	0.122186	0.001094	0.001317	0.004629	0.000920	0.000775
Parking Lot	0.515293	0.032970	0.181452	0.104385	0.022189	0.004852	0.007938	0.122186	0.001094	0.001317	0.004629	0.000920	0.000775
Unrefrigerated Warehouse-No Rail	0.515293	0.032970	0.181452	0.104385	0.022189	0.004852	0.007938	0.122186	0.001094	0.001317	0.004629	0.000920	0.000775

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0760	0.6827	0.5230	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.5333	828.5333	0.0159	0.0152	833.4569
NaturalGas Unmitigated	0.0760	0.6827	0.5230	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.5333	828.5333	0.0159	0.0152	833.4569

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1321.2	0.0143	0.1218	0.0518	7.8000e-004		9.8400e-003	9.8400e-003		9.8400e-003	9.8400e-003		155.4359	155.4359	2.9800e-003	2.8500e-003	156.3595
Junior College (2Yr)	5721.33	0.0617	0.5609	0.4712	3.3700e-003		0.0426	0.0426		0.0426	0.0426		673.0975	673.0975	0.0129	0.0123	677.0974
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0760**	**0.6827**	**0.5230**	**4.1500e-003**		**0.0525**	**0.0525**		**0.0525**	**0.0525**		**828.5333**	**828.5333**	**0.0159**	**0.0152**	**833.4569**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1.3212	0.0143	0.1218	0.0518	7.8000e-004		9.8400e-003	9.8400e-003		9.8400e-003	9.8400e-003		155.4359	155.4359	2.9800e-003	2.8500e-003	156.3595
Junior College (2Yr)	5.72133	0.0617	0.5609	0.4712	3.3700e-003		0.0426	0.0426		0.0426	0.0426		673.0975	673.0975	0.0129	0.0123	677.0974
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0760**	**0.6827**	**0.5230**	**4.1500e-003**		**0.0525**	**0.0525**		**0.0525**	**0.0525**		**828.5333**	**828.5333**	**0.0159**	**0.0152**	**833.4569**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.9170	0.1183	10.2813	5.4000e-004		0.0569	0.0569		0.0569	0.0569	0.0000	18.5511	18.5511	0.0180	0.0000	19.0006
Unmitigated	5.9170	0.1183	10.2813	5.4000e-004		0.0569	0.0569		0.0569	0.0569	0.0000	18.5511	18.5511	0.0180	0.0000	19.0006

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.4561					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1484					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3125	0.1183	10.2813	5.4000e-004		0.0569	0.0569		0.0569	0.0569		18.5511	18.5511	0.0180		19.0006
Total	**5.9170**	**0.1183**	**10.2813**	**5.4000e-004**		**0.0569**	**0.0569**		**0.0569**	**0.0569**	**0.0000**	**18.5511**	**18.5511**	**0.0180**	**0.0000**	**19.0006**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.4561					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1484					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3125	0.1183	10.2813	5.4000e-004		0.0569	0.0569		0.0569	0.0569		18.5511	18.5511	0.0180		19.0006
Total	**5.9170**	**0.1183**	**10.2813**	**5.4000e-004**		**0.0569**	**0.0569**		**0.0569**	**0.0569**	**0.0000**	**18.5511**	**18.5511**	**0.0180**	**0.0000**	**19.0006**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

College of the Siskiyous Master Plan

Siskiyou County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	96.19	1000sqft	2.21	96,190.00	0
Unrefrigerated Warehouse-No Rail	0.86	1000sqft	0.02	860.00	0
Other Non-Asphalt Surfaces	435.60	1000sqft	10.00	0.00	0
Parking Lot	64.35	1000sqft	1.48	0.00	0
Apartments Mid Rise	124.00	Dwelling Unit	0.74	96,800.00	355

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	85
Climate Zone	14			**Operational Year**	2026
Utility Company	PacifiCorp				
CO2 Intensity (lb/MWhr)	1656.39	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Reflects all project phases. Residential- 124-unit student housing (396 beds). Population adjusted to reflect annual average vacancy rate per COS estimates. Lot acreage adjusted to reflect building footprints. Industrial use=garage (vehicle storage).

Construction Phase - Construction schedule would change based on available construction funding.

Off-road Equipment - .

Off-road Equipment - .

Off-road Equipment - .

Off-road Equipment - .

Trips and VMT - Project would be constructed in phases as funding becomes available.

Demolition -

Architectural Coating - .

Vehicle Trips - Trip rate adjusted to account for on-site student housing and uses that would not generate trips over existing conditions. Reflects projections for student population and employees at build-out of the Master Plan.

Woodstoves - .

Area Coating - .

Energy Use -

Water And Wastewater - Adjusted to reflect replacement of old buildings with new buildings constructed in accordance with State regulations for water conservation and energy efficiency.

Solid Waste - No solid waste generation associated with Emergency Services Training garage,

Land Use Change -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	0.00	3,217.00
tblAreaCoating	Area_Parking	0	3217

tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFireplaces	NumberGas	68.20	0.00
tblFireplaces	NumberNoFireplace	12.40	0.00
tblFireplaces	NumberWood	43.40	0.00
tblGrading	AcresOfGrading	47.50	10.00
tblLandUse	LandUseSquareFeet	435,600.00	0.00
tblLandUse	LandUseSquareFeet	64,350.00	0.00
tblLandUse	LandUseSquareFeet	124,000.00	96,800.00
tblLandUse	LotAcreage	3.26	0.74
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.81	0.00
tblTripsAndVMT	WorkerTripLength	16.80	14.00
tblTripsAndVMT	WorkerTripLength	16.80	14.00
tblTripsAndVMT	WorkerTripLength	16.80	14.00
tblTripsAndVMT	WorkerTripLength	16.80	14.00

tblTripsAndVMT	WorkerTripLength	16.80	14.00
tblTripsAndVMT	WorkerTripLength	16.80	14.00
tblTripsAndVMT	WorkerTripNumber	20.00	15.00
tblVehicleTrips	HO_TL	7.90	3.00
tblVehicleTrips	HO_TTP	38.10	50.00
tblVehicleTrips	HS_TL	7.10	5.50
tblVehicleTrips	HS_TTP	19.60	10.00
tblVehicleTrips	HW_TL	16.80	5.50
tblVehicleTrips	HW_TTP	42.30	40.00
tblVehicleTrips	ST_TR	6.39	3.44
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	5.86	3.44
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	6.65	3.44
tblVehicleTrips	WD_TR	27.49	3.28
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	8,079,099.18	7,271,189.10
tblWater	IndoorWaterUseRate	4,718,026.44	4,246,223.80
tblWater	IndoorWaterUseRate	198,875.00	0.00
tblWater	OutdoorWaterUseRate	5,093,345.13	0.00
tblWater	OutdoorWaterUseRate	7,379,477.25	0.00
tblWoodstoves	NumberCatalytic	6.20	0.00
tblWoodstoves	NumberNoncatalytic	6.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2842	2.3212	2.1367	4.2600e-003	0.3159	0.1045	0.4204	0.1393	0.0973	0.2366	0.0000	377.3394	377.3394	0.0759	0.0000	379.2376
2022	2.9339	1.8685	2.3205	4.7300e-003	0.1415	0.0799	0.2213	0.0380	0.0751	0.1131	0.0000	419.4299	419.4299	0.0668	0.0000	421.0994
Maximum	**2.9339**	**2.3212**	**2.3205**	**4.7300e-003**	**0.3159**	**0.1045**	**0.4204**	**0.1393**	**0.0973**	**0.2366**	**0.0000**	**419.4299**	**419.4299**	**0.0759**	**0.0000**	**421.0994**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2842	2.3212	2.1367	4.2600e-003	0.1924	0.1045	0.2968	0.0762	0.0973	0.1735	0.0000	377.3391	377.3391	0.0759	0.0000	379.2373
2022	2.9339	1.8685	2.3205	4.7300e-003	0.1415	0.0799	0.2213	0.0380	0.0751	0.1131	0.0000	419.4296	419.4296	0.0668	0.0000	421.0992
Maximum	**2.9339**	**2.3212**	**2.3205**	**4.7300e-003**	**0.1924**	**0.1045**	**0.2968**	**0.0762**	**0.0973**	**0.1735**	**0.0000**	**419.4296**	**419.4296**	**0.0759**	**0.0000**	**421.0992**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**27.01**	**0.00**	**19.25**	**35.59**	**0.00**	**18.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**5-3-2021**	**8-2-2021**	1.2819	1.2819
2	**8-3-2021**	**11-2-2021**	0.7887	0.7887
3	**11-3-2021**	**2-2-2022**	0.7727	0.7727
4	**2-3-2022**	**5-2-2022**	0.6941	0.6941
5	**5-3-2022**	**8-2-2022**	0.7072	0.7072
6	**8-3-2022**	**9-30-2022**	0.4042	0.4042
		Highest	1.2819	1.2819

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0510	0.0107	0.9253	5.0000e-005		5.1200e-003	5.1200e-003		5.1200e-003	5.1200e-003	0.0000	1.5146	1.5146	1.4700e-003	0.0000	1.5513
Energy	0.0139	0.1246	0.0954	7.6000e-004		9.5800e-003	9.5800e-003		9.5800e-003	9.5800e-003	0.0000	1,296.6493	1,296.6493	0.0229	6.7100e-003	1,299.2236
Mobile	0.2685	2.5434	2.4672	0.0111	0.5753	7.2300e-003	0.5825	0.1548	6.7800e-003	0.1615	0.0000	1,033.2934	1,033.2934	0.0699	0.0000	1,035.0419
Waste						0.0000	0.0000		0.0000	0.0000	36.9626	0.0000	36.9626	2.1844	0.0000	91.5733
Water						0.0000	0.0000		0.0000	0.0000	3.6539	46.8232	50.4771	0.3761	9.0300e-003	62.5713
Total	**1.3333**	**2.6786**	**3.4880**	**0.0119**	**0.5753**	**0.0219**	**0.5972**	**0.1548**	**0.0215**	**0.1762**	**40.6166**	**2,378.2805**	**2,418.8971**	**2.6549**	**0.0157**	**2,489.9614**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0510	0.0107	0.9253	5.0000e-005		5.1200e-003	5.1200e-003		5.1200e-003	5.1200e-003	0.0000	1.5146	1.5146	1.4700e-003	0.0000	1.5513
Energy	0.0139	0.1246	0.0954	7.6000e-004		9.5800e-003	9.5800e-003		9.5800e-003	9.5800e-003	0.0000	678.0831	678.0831	0.0121	4.4700e-003	679.7189
Mobile	0.2598	2.4716	2.3025	0.0103	0.5126	6.5500e-003	0.5191	0.1379	6.1400e-003	0.1440	0.0000	955.8262	955.8262	0.0681	0.0000	957.5296
Waste						0.0000	0.0000		0.0000	0.0000	36.9626	0.0000	36.9626	2.1844	0.0000	91.5733
Water						0.0000	0.0000		0.0000	0.0000	2.9232	37.4585	40.3817	0.3009	7.2200e-003	50.0570
Total	**1.3246**	**2.6068**	**3.3232**	**0.0111**	**0.5126**	**0.0213**	**0.5338**	**0.1379**	**0.0208**	**0.1587**	**39.8858**	**1,672.8825**	**1,712.7682**	**2.5670**	**0.0117**	**1,780.4301**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.65**	**2.68**	**4.72**	**7.05**	**10.90**	**3.10**	**10.61**	**10.90**	**2.98**	**9.94**	**1.80**	**29.66**	**29.19**	**3.31**	**25.73**	**28.50**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	-1,110.0000
Total	**-1,110.0000**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/3/2021	5/28/2021	5	20	
2	Site Preparation	Site Preparation	5/29/2021	6/11/2021	5	10	
3	Grading	Grading	6/12/2021	7/23/2021	5	30	
4	Building Construction	Building Construction	7/24/2021	9/16/2022	5	300	
5	Paving	Paving	9/17/2022	10/14/2022	5	20	
6	Architectural Coating	Architectural Coating	10/15/2022	11/11/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 11.48

Residential Indoor: 196,020; Residential Outdoor: 65,340; Non-Residential Indoor: 145,575; Non-Residential Outdoor: 48,525; Striped Parking Area: 3,217 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	7.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	7.00	132	0.36
Paving	Rollers	2	7.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	149.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	15.00	0.00	0.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	130.00	29.00	0.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	26.00	0.00	0.00	14.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0161	0.0000	0.0161	2.4400e-003	0.0000	2.4400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**	**0.0161**	**0.0155**	**0.0316**	**2.4400e-003**	**0.0144**	**0.0169**	**0.0000**	**34.0008**	**34.0008**	**9.5700e-003**	**0.0000**	**34.2400**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.1000e-004	0.0195	3.2100e-003	6.0000e-005	1.2500e-003	7.0000e-005	1.3200e-003	3.4000e-004	6.0000e-005	4.1000e-004	0.0000	5.8911	5.8911	2.9000e-004	0.0000	5.8984
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2800e-003	9.5000e-004	8.5800e-003	2.0000e-005	1.5200e-003	1.0000e-005	1.5300e-003	4.0000e-004	1.0000e-005	4.2000e-004	0.0000	1.4723	1.4723	8.0000e-005	0.0000	1.4742
Total	**1.8900e-003**	**0.0204**	**0.0118**	**8.0000e-005**	**2.7700e-003**	**8.0000e-005**	**2.8500e-003**	**7.4000e-004**	**7.0000e-005**	**8.3000e-004**	**0.0000**	**7.3634**	**7.3634**	**3.7000e-004**	**0.0000**	**7.3725**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.2400e-003	0.0000	7.2400e-003	1.1000e-003	0.0000	1.1000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**	**7.2400e-003**	**0.0155**	**0.0228**	**1.1000e-003**	**0.0144**	**0.0155**	**0.0000**	**34.0007**	**34.0007**	**9.5700e-003**	**0.0000**	**34.2400**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.1000e-004	0.0195	3.2100e-003	6.0000e-005	1.2500e-003	7.0000e-005	1.3200e-003	3.4000e-004	6.0000e-005	4.1000e-004	0.0000	5.8911	5.8911	2.9000e-004	0.0000	5.8984
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2800e-003	9.5000e-004	8.5800e-003	2.0000e-005	1.5200e-003	1.0000e-005	1.5300e-003	4.0000e-004	1.0000e-005	4.2000e-004	0.0000	1.4723	1.4723	8.0000e-005	0.0000	1.4742
Total	**1.8900e-003**	**0.0204**	**0.0118**	**8.0000e-005**	**2.7700e-003**	**8.0000e-005**	**2.8500e-003**	**7.4000e-004**	**7.0000e-005**	**8.3000e-004**	**0.0000**	**7.3634**	**7.3634**	**3.7000e-004**	**0.0000**	**7.3725**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1581	0.0000	0.1581	0.0869	0.0000	0.0869	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0165	0.1724	0.0869	1.6000e-004		8.6700e-003	8.6700e-003		7.9700e-003	7.9700e-003	0.0000	13.9457	13.9457	4.5100e-003	0.0000	14.0585
Total	**0.0165**	**0.1724**	**0.0869**	**1.6000e-004**	**0.1581**	**8.6700e-003**	**0.1668**	**0.0869**	**7.9700e-003**	**0.0949**	**0.0000**	**13.9457**	**13.9457**	**4.5100e-003**	**0.0000**	**14.0585**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	5.7000e-004	5.1500e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8834	0.8834	5.0000e-005	0.0000	0.8845
Total	**7.7000e-004**	**5.7000e-004**	**5.1500e-003**	**1.0000e-005**	**9.1000e-004**	**1.0000e-005**	**9.2000e-004**	**2.4000e-004**	**1.0000e-005**	**2.5000e-004**	**0.0000**	**0.8834**	**0.8834**	**5.0000e-005**	**0.0000**	**0.8845**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0711	0.0000	0.0711	0.0391	0.0000	0.0391	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0165	0.1724	0.0869	1.6000e-004		8.6700e-003	8.6700e-003		7.9700e-003	7.9700e-003	0.0000	13.9457	13.9457	4.5100e-003	0.0000	14.0584
Total	**0.0165**	**0.1724**	**0.0869**	**1.6000e-004**	**0.0711**	**8.6700e-003**	**0.0798**	**0.0391**	**7.9700e-003**	**0.0471**	**0.0000**	**13.9457**	**13.9457**	**4.5100e-003**	**0.0000**	**14.0584**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	5.7000e-004	5.1500e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8834	0.8834	5.0000e-005	0.0000	0.8845
Total	**7.7000e-004**	**5.7000e-004**	**5.1500e-003**	**1.0000e-005**	**9.1000e-004**	**1.0000e-005**	**9.2000e-004**	**2.4000e-004**	**1.0000e-005**	**2.5000e-004**	**0.0000**	**0.8834**	**0.8834**	**5.0000e-005**	**0.0000**	**0.8845**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0505	0.0000	0.0505	0.0254	0.0000	0.0254	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0545	0.6075	0.4008	8.1000e-004		0.0259	0.0259		0.0239	0.0239	0.0000	70.9620	70.9620	0.0230	0.0000	71.5358
Total	**0.0545**	**0.6075**	**0.4008**	**8.1000e-004**	**0.0505**	**0.0259**	**0.0764**	**0.0254**	**0.0239**	**0.0493**	**0.0000**	**70.9620**	**70.9620**	**0.0230**	**0.0000**	**71.5358**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9200e-003	1.4300e-003	0.0129	2.0000e-005	2.2700e-003	2.0000e-005	2.3000e-003	6.1000e-004	2.0000e-005	6.3000e-004	0.0000	2.2084	2.2084	1.2000e-004	0.0000	2.2113
Total	**1.9200e-003**	**1.4300e-003**	**0.0129**	**2.0000e-005**	**2.2700e-003**	**2.0000e-005**	**2.3000e-003**	**6.1000e-004**	**2.0000e-005**	**6.3000e-004**	**0.0000**	**2.2084**	**2.2084**	**1.2000e-004**	**0.0000**	**2.2113**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0227	0.0000	0.0227	0.0114	0.0000	0.0114	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0545	0.6075	0.4008	8.1000e-004		0.0259	0.0259		0.0239	0.0239	0.0000	70.9620	70.9620	0.0230	0.0000	71.5357
Total	**0.0545**	**0.6075**	**0.4008**	**8.1000e-004**	**0.0227**	**0.0259**	**0.0486**	**0.0114**	**0.0239**	**0.0353**	**0.0000**	**70.9620**	**70.9620**	**0.0230**	**0.0000**	**71.5357**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9200e-003	1.4300e-003	0.0129	2.0000e-005	2.2700e-003	2.0000e-005	2.3000e-003	6.1000e-004	2.0000e-005	6.3000e-004	0.0000	2.2084	2.2084	1.2000e-004	0.0000	2.2113
Total	**1.9200e-003**	**1.4300e-003**	**0.0129**	**2.0000e-005**	**2.2700e-003**	**2.0000e-005**	**2.3000e-003**	**6.1000e-004**	**2.0000e-005**	**6.3000e-004**	**0.0000**	**2.2084**	**2.2084**	**1.2000e-004**	**0.0000**	**2.2113**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1043	0.9661	0.9155	1.5000e-003		0.0528	0.0528		0.0496	0.0496	0.0000	128.9429	128.9429	0.0310	0.0000	129.7185
Total	**0.1043**	**0.9661**	**0.9155**	**1.5000e-003**		**0.0528**	**0.0528**		**0.0496**	**0.0496**	**0.0000**	**128.9429**	**128.9429**	**0.0310**	**0.0000**	**129.7185**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8100e-003	0.1908	0.0604	4.8000e-004	9.8000e-003	7.2000e-004	0.0105	2.8400e-003	6.9000e-004	3.5300e-003	0.0000	45.6650	45.6650	3.5200e-003	0.0000	45.7529
Worker	0.0638	0.0475	0.4276	8.1000e-004	0.0756	7.3000e-004	0.0763	0.0201	6.7000e-004	0.0208	0.0000	73.3679	73.3679	3.8300e-003	0.0000	73.4636
Total	**0.0726**	**0.2384**	**0.4880**	**1.2900e-003**	**0.0854**	**1.4500e-003**	**0.0868**	**0.0230**	**1.3600e-003**	**0.0243**	**0.0000**	**119.0328**	**119.0328**	**7.3500e-003**	**0.0000**	**119.2165**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1043	0.9661	0.9155	1.5000e-003		0.0528	0.0528		0.0496	0.0496	0.0000	128.9428	128.9428	0.0310	0.0000	129.7183
Total	**0.1043**	**0.9661**	**0.9155**	**1.5000e-003**		**0.0528**	**0.0528**		**0.0496**	**0.0496**	**0.0000**	**128.9428**	**128.9428**	**0.0310**	**0.0000**	**129.7183**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8100e-003	0.1908	0.0604	4.8000e-004	9.8000e-003	7.2000e-004	0.0105	2.8400e-003	6.9000e-004	3.5300e-003	0.0000	45.6650	45.6650	3.5200e-003	0.0000	45.7529
Worker	0.0638	0.0475	0.4276	8.1000e-004	0.0756	7.3000e-004	0.0763	0.0201	6.7000e-004	0.0208	0.0000	73.3679	73.3679	3.8300e-003	0.0000	73.4636
Total	**0.0726**	**0.2384**	**0.4880**	**1.2900e-003**	**0.0854**	**1.4500e-003**	**0.0868**	**0.0230**	**1.3600e-003**	**0.0243**	**0.0000**	**119.0328**	**119.0328**	**7.3500e-003**	**0.0000**	**119.2165**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1507	1.3909	1.4540	2.4100e-003		0.0717	0.0717		0.0674	0.0674	0.0000	207.5113	207.5113	0.0496	0.0000	208.7509
Total	**0.1507**	**1.3909**	**1.4540**	**2.4100e-003**		**0.0717**	**0.0717**		**0.0674**	**0.0674**	**0.0000**	**207.5113**	**207.5113**	**0.0496**	**0.0000**	**208.7509**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0130	0.2909	0.0879	7.7000e-004	0.0158	1.0200e-003	0.0168	4.5700e-003	9.7000e-004	5.5400e-003	0.0000	72.9987	72.9987	5.4800e-003	0.0000	73.1358
Worker	0.0954	0.0678	0.6051	1.2600e-003	0.1215	1.1200e-003	0.1227	0.0324	1.0300e-003	0.0334	0.0000	113.9256	113.9256	5.3600e-003	0.0000	114.0597
Total	**0.1084**	**0.3586**	**0.6929**	**2.0300e-003**	**0.1373**	**2.1400e-003**	**0.1394**	**0.0369**	**2.0000e-003**	**0.0389**	**0.0000**	**186.9243**	**186.9243**	**0.0108**	**0.0000**	**187.1955**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1507	1.3909	1.4540	2.4100e-003		0.0717	0.0717		0.0674	0.0674	0.0000	207.5111	207.5111	0.0496	0.0000	208.7507
Total	**0.1507**	**1.3909**	**1.4540**	**2.4100e-003**		**0.0717**	**0.0717**		**0.0674**	**0.0674**	**0.0000**	**207.5111**	**207.5111**	**0.0496**	**0.0000**	**208.7507**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0130	0.2909	0.0879	7.7000e-004	0.0158	1.0200e-003	0.0168	4.5700e-003	9.7000e-004	5.5400e-003	0.0000	72.9987	72.9987	5.4800e-003	0.0000	73.1358
Worker	0.0954	0.0678	0.6051	1.2600e-003	0.1215	1.1200e-003	0.1227	0.0324	1.0300e-003	0.0334	0.0000	113.9256	113.9256	5.3600e-003	0.0000	114.0597
Total	**0.1084**	**0.3586**	**0.6929**	**2.0300e-003**	**0.1373**	**2.1400e-003**	**0.1394**	**0.0369**	**2.0000e-003**	**0.0389**	**0.0000**	**186.9243**	**186.9243**	**0.0108**	**0.0000**	**187.1955**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0102	0.1026	0.1348	2.1000e-004		5.2200e-003	5.2200e-003		4.8000e-003	4.8000e-003	0.0000	18.5566	18.5566	6.0000e-003	0.0000	18.7067
Paving	1.9400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0121**	**0.1026**	**0.1348**	**2.1000e-004**		**5.2200e-003**	**5.2200e-003**		**4.8000e-003**	**4.8000e-003**	**0.0000**	**18.5566**	**18.5566**	**6.0000e-003**	**0.0000**	**18.7067**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1900e-003	8.5000e-004	7.5500e-003	2.0000e-005	1.5200e-003	1.0000e-005	1.5300e-003	4.0000e-004	1.0000e-005	4.2000e-004	0.0000	1.4211	1.4211	7.0000e-005	0.0000	1.4228
Total	**1.1900e-003**	**8.5000e-004**	**7.5500e-003**	**2.0000e-005**	**1.5200e-003**	**1.0000e-005**	**1.5300e-003**	**4.0000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.4211**	**1.4211**	**7.0000e-005**	**0.0000**	**1.4228**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0102	0.1026	0.1348	2.1000e-004		5.2200e-003	5.2200e-003		4.8000e-003	4.8000e-003	0.0000	18.5566	18.5566	6.0000e-003	0.0000	18.7066
Paving	1.9400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0121**	**0.1026**	**0.1348**	**2.1000e-004**		**5.2200e-003**	**5.2200e-003**		**4.8000e-003**	**4.8000e-003**	**0.0000**	**18.5566**	**18.5566**	**6.0000e-003**	**0.0000**	**18.7066**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1900e-003	8.5000e-004	7.5500e-003	2.0000e-005	1.5200e-003	1.0000e-005	1.5300e-003	4.0000e-004	1.0000e-005	4.2000e-004	0.0000	1.4211	1.4211	7.0000e-005	0.0000	1.4228
Total	**1.1900e-003**	**8.5000e-004**	**7.5500e-003**	**2.0000e-005**	**1.5200e-003**	**1.0000e-005**	**1.5300e-003**	**4.0000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.4211**	**1.4211**	**7.0000e-005**	**0.0000**	**1.4228**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6575					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**2.6595**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0600e-003	1.4600e-003	0.0131	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.4633	2.4633	1.2000e-004	0.0000	2.4662
Total	**2.0600e-003**	**1.4600e-003**	**0.0131**	**3.0000e-005**	**2.6300e-003**	**2.0000e-005**	**2.6500e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.4633**	**2.4633**	**1.2000e-004**	**0.0000**	**2.4662**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6575					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**2.6595**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0600e-003	1.4600e-003	0.0131	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.4633	2.4633	1.2000e-004	0.0000	2.4662
Total	**2.0600e-003**	**1.4600e-003**	**0.0131**	**3.0000e-005**	**2.6300e-003**	**2.0000e-005**	**2.6500e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.4633**	**2.4633**	**1.2000e-004**	**0.0000**	**2.4662**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2598	2.4716	2.3025	0.0103	0.5126	6.5500e-003	0.5191	0.1379	6.1400e-003	0.1440	0.0000	955.8262	955.8262	0.0681	0.0000	957.5296
Unmitigated	0.2685	2.5434	2.4672	0.0111	0.5753	7.2300e-003	0.5825	0.1548	6.7800e-003	0.1615	0.0000	1,033.2934	1,033.2934	0.0699	0.0000	1,035.0419

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	426.56	426.56	426.56	586,117	522,230
Junior College (2Yr)	315.50	1,080.21	116.39	962,825	857,877
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	742.06	1,506.77	542.95	1,548,941	1,380,107

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.50	5.50	3.00	40.00	10.00	50.00	86	11	3
Junior College (2Yr)	14.70	6.60	6.60	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	14.70	6.60	6.60	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.515293	0.032970	0.181452	0.104385	0.022189	0.004852	0.007938	0.122186	0.001094	0.001317	0.004629	0.000920	0.000775
Junior College (2Yr)	0.515293	0.032970	0.181452	0.104385	0.022189	0.004852	0.007938	0.122186	0.001094	0.001317	0.004629	0.000920	0.000775
Other Non-Asphalt Surfaces	0.515293	0.032970	0.181452	0.104385	0.022189	0.004852	0.007938	0.122186	0.001094	0.001317	0.004629	0.000920	0.000775
Parking Lot	0.515293	0.032970	0.181452	0.104385	0.022189	0.004852	0.007938	0.122186	0.001094	0.001317	0.004629	0.000920	0.000775
Unrefrigerated Warehouse-No Rail	0.515293	0.032970	0.181452	0.104385	0.022189	0.004852	0.007938	0.122186	0.001094	0.001317	0.004629	0.000920	0.000775

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	540.9101	540.9101	9.4700e-003	1.9600e-003	541.7307
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,159.4763	1,159.4763	0.0203	4.2000e-003	1,161.2354
NaturalGas Mitigated	0.0139	0.1246	0.0954	7.6000e-004		9.5800e-003	9.5800e-003		9.5800e-003	9.5800e-003	0.0000	137.1730	137.1730	2.6300e-003	2.5100e-003	137.9881
NaturalGas Unmitigated	0.0139	0.1246	0.0954	7.6000e-004		9.5800e-003	9.5800e-003		9.5800e-003	9.5800e-003	0.0000	137.1730	137.1730	2.6300e-003	2.5100e-003	137.9881

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	482240	2.6000e-003	0.0222	9.4600e-003	1.4000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	25.7342	25.7342	4.9000e-004	4.7000e-004	25.8871
Junior College (2Yr)	2.08828e+006	0.0113	0.1024	0.0860	6.1000e-004		7.7800e-003	7.7800e-003		7.7800e-003	7.7800e-003	0.0000	111.4388	111.4388	2.1400e-003	2.0400e-003	112.1011
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0139**	**0.1246**	**0.0955**	**7.5000e-004**		**9.5800e-003**	**9.5800e-003**		**9.5800e-003**	**9.5800e-003**	**0.0000**	**137.1730**	**137.1730**	**2.6300e-003**	**2.5100e-003**	**137.9881**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	482240	2.6000e-003	0.0222	9.4600e-003	1.4000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	25.7342	25.7342	4.9000e-004	4.7000e-004	25.8871
Junior College (2Yr)	2.08828e+006	0.0113	0.1024	0.0860	6.1000e-004		7.7800e-003	7.7800e-003		7.7800e-003	7.7800e-003	0.0000	111.4388	111.4388	2.1400e-003	2.0400e-003	112.1011
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0139**	**0.1246**	**0.0955**	**7.5000e-004**		**9.5800e-003**	**9.5800e-003**		**9.5800e-003**	**9.5800e-003**	**0.0000**	**137.1730**	**137.1730**	**2.6300e-003**	**2.5100e-003**	**137.9881**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	573645	430.9944	7.5500e-003	1.5600e-003	431.6483
Junior College (2Yr)	969595	728.4820	0.0128	2.6400e-003	729.5872
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**1,159.4763**	**0.0203**	**4.2000e-003**	**1,161.2354**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	279467	209.9711	3.6800e-003	7.6000e-004	210.2897
Junior College (2Yr)	440473	330.9389	5.7900e-003	1.2000e-003	331.4410
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**540.9101**	**9.4700e-003**	**1.9600e-003**	**541.7307**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0510	0.0107	0.9253	5.0000e-005		5.1200e-003	5.1200e-003		5.1200e-003	5.1200e-003	0.0000	1.5146	1.5146	1.4700e-003	0.0000	1.5513
Unmitigated	1.0510	0.0107	0.9253	5.0000e-005		5.1200e-003	5.1200e-003		5.1200e-003	5.1200e-003	0.0000	1.5146	1.5146	1.4700e-003	0.0000	1.5513

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2658					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7571					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0281	0.0107	0.9253	5.0000e-005		5.1200e-003	5.1200e-003		5.1200e-003	5.1200e-003	0.0000	1.5146	1.5146	1.4700e-003	0.0000	1.5513
Total	**1.0510**	**0.0107**	**0.9253**	**5.0000e-005**		**5.1200e-003**	**5.1200e-003**		**5.1200e-003**	**5.1200e-003**	**0.0000**	**1.5146**	**1.5146**	**1.4700e-003**	**0.0000**	**1.5513**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2658					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7571					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0281	0.0107	0.9253	5.0000e-005		5.1200e-003	5.1200e-003		5.1200e-003	5.1200e-003	0.0000	1.5146	1.5146	1.4700e-003	0.0000	1.5513
Total	**1.0510**	**0.0107**	**0.9253**	**5.0000e-005**		**5.1200e-003**	**5.1200e-003**		**5.1200e-003**	**5.1200e-003**	**0.0000**	**1.5146**	**1.5146**	**1.4700e-003**	**0.0000**	**1.5513**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	40.3817	0.3009	7.2200e-003	50.0570
Unmitigated	50.4771	0.3761	9.0300e-003	62.5713

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.27119 / 0	31.8673	0.2375	5.7000e-003	39.5026
Junior College (2Yr)	4.24622 / 0	18.6098	0.1387	3.3300e-003	23.0687
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**50.4771**	**0.3761**	**9.0300e-003**	**62.5713**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	5.81695 / 0	25.4938	0.1900	4.5600e-003	31.6021
Junior College (2Yr)	3.39698 / 0	14.8879	0.1109	2.6600e-003	18.4550
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**40.3817**	**0.3009**	**7.2200e-003**	**50.0570**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	36.9626	2.1844	0.0000	91.5733
Unmitigated	36.9626	2.1844	0.0000	91.5733

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	57.04	11.5786	0.6843	0.0000	28.6855
Junior College (2Yr)	125.05	25.3840	1.5002	0.0000	62.8878
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**36.9626**	**2.1844**	**0.0000**	**91.5733**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	57.04	11.5786	0.6843	0.0000	28.6855
Junior College (2Yr)	125.05	25.3840	1.5002	0.0000	62.8878
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**36.9626**	**2.1844**	**0.0000**	**91.5733**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-1,110.0000	0.0000	0.0000	-1,110.0000

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Trees	210 / 200	-1,110.0000	0.0000	0.0000	-1,110.0000
Total		**-1,110.0000**	**0.0000**	**0.0000**	**-1,110.0000**

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APPENDIX B

BIOLOGICAL REPORTS

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Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
PLANTS						
Aleppo avens *Geum aleppicum*	2B.2	Aleppo avens is a perennial herb that occurs in Great Basin scrub, lower montane coniferous forest, and meadows and seeps. The species is reported between 1,476 to 4,921 feet in elevation. The flowering period is June through August.	Yes	No	No	Although marginally suitable habitat for the Aleppo avens is present on the project site, the species was not observed during the botanical survey and is not expected to be present.
Alkali hymenoxys *Hymenoxys lemmonii*	2B.2	Alkali hymenoxys is a perennial herb that occurs in subalkaline soils in Great Basin scrub, lower montane coniferous forest, and meadows and seeps. The species is reported between 800 and 3,300 feet in elevation. The flowering period is June through September.	No	No	No	According to CNDDB records, the closest reported occurrence of alkali hymenoxys is ±3 miles northwest of the project site. However, no potentially suitable habitat for alkali hymenoxys is present on the project site. Alkali hymenoxys was not observed during the botanical survey and is not expected to be present.
Blue alpine phacelia *Phacelia sericea* var. *ciliosa*	2B.3	Blue alpine phacelia is a perennial herb that occurs in Great Basin scrub and in rocky areas of upper montane coniferous forests. The species occurs between 6,889 and 8,858 feet in elevation. The flowering period is from June through August.	No	No	No	The elevational range of the project area is well below that preferred by the blue alpine phacelia. The species was not observed during the botanical survey and is not expected to be present.
Brittle prickly pear *Opuntia fragilis*	2B.1	Brittle prickly pear is a perennial succulent that occurs in volcanic soils of pinyon and juniper woodlands. This species is present between 2,690 and 2,887 feet in elevation. The flowering period is April through June.	No	No	No	The elevational range of the project area is outside of the known range of the brittle prickly pear, and no potential habitat is present on-site. This species was not observed during the botanical survey and is not expected to be present.
Broad-nerved hump moss *Meesia uliginosa*	2B.2	Broad-nerved hump moss occurs in damp soils associated with bogs and fens, meadows and seeps, subalpine coniferous forests, and upper montane coniferous forests. This species occurs between 3,969 and 9,199 feet in elevation.	No	No	No	Broad-nerved hump moss generally occurs above the elevational range of the project area and no suitable habitat is present on the site. The species is not expected to be present.
Canadian buffalo-berry *Shepherdia canadensis*	2B.1	Canadian buffalo-berry is a perennial shrub that prefers serpentine and rocky areas along streamside in upper montane coniferous forests. This species occurs around 5,500 feet in elevation and flowers from April through July.	No	No	No	The project site occurs below the known elevational range of this species. This species was not observed during the botanical survey and is not expected to be present.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Cascade grass-of-Parnassus *Paranassia cirrata* var. *intermedia*	2B.2	Cascade grass-of-Parnassus is a perennial herb that occurs in rocky, serpentine soils in bogs, fens, meadows, and seeps. The species is present between 2,559 and 6,496 feet in elevation. The flowering period is from August through September.	No	No	No	The project site does not contain suitable habitat for this species. This species was not observed during the botanical survey and is not expected to be present.
Cascade stonecrop *Sedum divergens*	2B.3	Cascade stonecrop is a perennial herb that occurs in alpine boulder and rock fields. The elevational range of this species is between 5,250 and 7,650 feet. The flowering period is from July to September.	No	No	No	The project site is outside the known elevational range of this species. Cascade stonecrop was not observed during the botanical survey and it is not expected to be present.
Coast fawn lily *Erythronium revolutum*	2B.2	Coast fawn lily, a perennial herb, occurs along streambanks, bogs, and fens in broadleaf upland forests and North Coast coniferous forests. The species is reported between sea level and 5,300 feet in elevation. The flowering period is March through August.	No	No	No	No potentially suitable habitat for coast fawn lily is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Cooke's phacelia *Phacelia cookei*	1B.1	Cooke's phacelia is an annual herb that prefers sandy, volcanic soils in Great Basin scrub and lower montane coniferous forests. This species occurs between 3,592 and 5,577 feet in elevation and flower from June through July.	Yes	No	No	The ponderosa pine habitat in the project area may provide some low-quality habitat for Cooke's phacelia; however the species was not observed during the botanical survey and is not expected to be present.
Crested potentilla *Potentilla cristae*	1B.3	Crested potentilla is a perennial herb that occurs in seasonally mesic, often serpentine seeps, and gravelly or rocky areas in alpine boulder and rock fields, and subalpine coniferous forests. The elevational range for this species is approximately 5,900 to 9,200 feet. The flowering period is from August to September.	No	No	No	The project area occurs outside the known elevational range of the crested potentilla. The species was not observed during the botanical survey and is not expected to be present.
Gasquet rose *Rosa gymnocarpa* var. *serpentina*	1B.3	The Gasquet rose is a perennial rhizomatous shrub that prefers serpentine soils, often along ridges, roadsides, streambanks, and openings in chaparral and cismontane woodland habitats. The elevation range of this species is between 1,312 and 5,659 feet. The flowering period is from April to June or August.	No	No	No	The project area does not contain serpentine soils as preferred by this species. The Gasquet rose was not observed during the botanical survey and is not expected to be present.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Golden alpine draba *Draba aureola*	1B.3	The golden alpine draba occurs in serpentine or volcanic soils in alpine boulder and rock fields, and subalpine coniferous forests. The species has been recorded between 6,500 and 11,000 feet in elevation. The flowering period is from July through August.	No	No	No	The project area occurs outside the known elevational range of this species. The golden alpine draba was not observed during the botanical survey and is not expected to be present.
Great Basin claytonia *Claytonia umbellata*	2B.3	Great Basin claytonia is a perennial herb that occurs on talus slopes in subalpine coniferous forests. The species has been reported between 5,500 and 11,500 feet in elevation. The flowering period is from May to August.	No	No	No	The project area occurs outside the known elevational range of the species. Additionally, the species was not observed during the botanical survey and is not expected to be present.
Green yellow sedge *Carex viridula* ssp*. viridula*	2B.3	Green yellow sedge is a perennial herb that occurs in bogs and fens, freshwater marshes and swamps, and mesic North Coast coniferous forest habitats. The species has been recorded to occur anywhere below approximately 5,500 feet in elevation. The flowering period is between July and September.	Yes	No	No	Although the fresh emergent wetland on site may provide potential habitat for the green yellow sedge, the species was not detected during the botanical survey and is not expected to be present.
Hairy mash hedge-nettle *Stachys pilosa*	2B.3	Hairy marsh hedge-nettle is a perennial rhizomatous herb that occurs in mesic Great Basin scrub, meadow, and seep habitats. The elevational range of the species is between 3,900 and 5,800 feet.	No	No	No	The project area is outside the known elevational range of this species. The hairy marsh hedge-nettle was not observed during the botanical survey and is not expected to be present.
Henderson's triteleia *Triteleia hendersonii*	2B.2	Henderson's triteleia, a perennial bulbiferous herb, occurs in cismontane woodland habitats, on open dry slopes and road banks. The species is reported between 2,500 and 3,900 feet in elevation. The flowering period is May through July.	Yes	No	No	According to CNDDB records, the closest reported occurrence of Henderson's triteleia is ±4 miles northwest of the project site. Henderson's triteleia was not observed during the botanical survey and is not expected to be present.
Jepson's dodder *Cuscuta jepsonii*	1B.2	Jepson's dodder is a parasitic annual vine that occurs in boradleafed upland forests, and lower and upper montane coniferous forests. Host plant species include *Ceanothus diversifolius* and *Ceanothus prostrates*. The species has been recorded between 3,937 and 7,545 feet in elevation and flowers from June through September.	No	No	No	The project area is outside the known elevational range of the species. Jepson's dodder was not observed during the botanical survey and is not expected to be present.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Klamath manzanita *Arctostaphylos klamathensis*	1B.2	Klamath manzanita is a perennial evergreen shrub that prefers serpentine or gabbro rocky areas in montane chaparral, lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forests. The species occurs between 4,500 and 7,400 feet in elevation and blooms from May through August.	No	No	No	The project area is outside the known elevational range of this species. Klamath manzanita was not observed during the botanical survey and is not expected to be present.
Klamath sedge *Carex klamathensis*	1B.2	Klamath sedge is a perennial rhizomatous herb that occurs in serpentine soils of chaparral, cismontane woodland, and meadow and seep habitats. The species has been recorded between 2,900 and 5,300 feet in elevation. The flowering period is from June through July.	No	No	No	Serpentine soils are not present in the project area. Additionally, Klamath sedge was not observed during the botanical survey and is not expected to be present.
Little hulsea *Hulsea nana*	2B.3	Little hulsea is a perennial herb that occurs in rocky or gravelly volcanic soils in alpine boulder and rock fields or subalpine coniferous forests. The species has been recorded between 5,600 and 11,000 feet in elevation. The flowering period is from July through August.	No	No	No	The project area is outside of the known elevational range of this species. Little hulsea was not observed during the botanical survey and is not expected to be present.
Little-leaved huckleberry *Vaccinium scoparium*	2B.2	Little-leaved huckleberry is a perennial deciduous shrub that occurs in rocky outcrops of subalpine coniferous forests. The known elevational range of the species is between 3,300 and 7,300 feet. The flowering period is from June to August.	No	No	No	No rocky outcrops or subalpine coniferous forest habitat is present in the study area. Little-leaved huckleberry was not observed during the botanical survey and is not expected to be present.
Marsh skullcap *Scutellaria galericulata*	2B.2	Marsh skullcap is a perennial rhizomatous herb that occurs in lower montane coniferous forests, meadows and seeps, and marshes and swamps. The species occurs between 3,200 and 6,900 feet. The blooming period is from June through September.	Yes	No	No	Although the onsite wetland contains marginally suitable habitat for marsh skullcap, this species was not observed during the botanical survey and is not expected to be present.
Modoc green-gentian *Frasera albicaulis* var. *modocensis*	2B.3	Modoc green-gentian is a perennial herb that prefers openings in Great Basin grassland and occasionally upper montane coniferous forest. The elevational range for the species is between 2,900 and 5,800 feet. The flowering period is between May and July.	No	No	No	Suitable habitat for the Modoc green-gentian does not exist in the project area. This species was not observed during the botanical survey and is not expected to be present.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Mt. Eddy draba *Draba howellii* var*. carnosula*	1B.3	Mt. Eddy draba is a perennial herb that occurs in serpentine and rocky areas in subalpine coniferous forest and upper montane coniferous forest. The elevational range for this species is between 6,300 and 9,900 feet. The flowering period is from July through August.	No	No	No	The project area is below the elevational range for this species. Mt. Eddy draba was not observed during the botanical survey and is not expected to be present.
Mt. Eddy sky pilot *Polemonium eddyense*	1B.2	Mt. Eddy sky pilot is a perennial herb that occurs in serpentine or peridotite alpine boulder and rock fields. The species has been recorded between 8,100 and 9,000 feet in elevation. The flowering period is from June through August.	No	No	No	The project area is below the elevational range for this species. Mt. Eddy sky pilot was not observed during the botanical surveys and is not expected to be present.
Mt. Shasta sky pilot *Polemonium pulcherrimum* var*. shastense*	1B.2	Mt. Shasta sky pilot is a perennial herb that may occur in volcanic soils in alpine boulder and rock fields, subalpine coniferous forests, and upper montane coniferous forests. The elevational range of the species is between 7,100 and 12,800 feet. The flowering period is from June through September.	No	No	No	The project area is below the elevational range for this species. Mt. Shasta sky pilot was not observed during the botanical survey and is not expected to be present.
Northern adder's-tongue *Ophioglossum pusillum*	2B.2	Northern adder's tongue is a perennial rhizomatous herb that occurs in meadows and seeps, and along the margins of marshes and swamps. The elevational range of the species is between 3,200 and 6,600 feet.	Yes	No	No	Although marginally suitable habitat for Northern adder's-tongue is present in the onsite wetland, the species was not observed during the botanical survey and is not expected to be present.
Oregon fireweed *Epilobium oreganum*	1B.1	Oregon fireweed is associated with springs, bogs, fens, and meadows in montane coniferous forest. The species sometimes occurs on serpentine soils. The species is reported between 1,600 and 7,400 feet in elevation. The flowering period is June through September.	Yes	No	No	Although marginally suitable habitat for Oregon fireweed is present is present in the onsite wetland, the species was not observed during the botanical survey and is not expected to be present.
Pallid bird's-beak *Cordylanthus tenuis* ssp. *pallescens*	1B.1	Pallid bird's-beak occurs on open volcanic alluvium within lower montane coniferous forest. The species is reported between 2,200 and 5,400 feet in elevation. The flowering period is July through September.	Yes	No	No	According to CNDDB records, pallid bird's beak was reported approximately 0.8 miles northeast of the project site in 2010. Although suitable habitat for pallid bird's beak is present on the project site, the species was not observed and is not expected to be present.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Peck's lomatium *Lomatium peckianum*	2B.2	Peck's lomatium occurs on rocky slopes or grassy openings in ponderosa pine-black oak woodland or in juniper woodland. The species is reported between 2,300 and 5,900 feet in elevation. The flowering period is April and May.	Yes	No	No	According to CNDDB records, Peck's lomatium was reported approximately 4.5 miles northwest of the project site in 2012. Although marginally suitable habitat for Peck's lomatium is present on the project site, the species was not observed and is not expected to be present.
Pickering's ivesia *Ivesia pickeringii*	1B.2	Pickering's ivesia occurs in hanging bogs on serpentine ledges between 2,500 and 4,500 feet above sea level in Siskiyou and Trinity counties. The flowering period is June through October.	No	No	No	According to CNDDB records, the closest reported occurrence of Pickering's ivesia is approximately 3.3 miles north of the project site. However, no potentially suitable habitat for Pickering's ivesia is present on the project site. Pickering's ivesia was not observed during the botanical survey and is not expected to be present.
Pink-margined monkeyflower *Erythranthe trinitensis*	1B.3	Pink-margined monkeyflower is an annual herb that occurs in cismontane woodland, lower montane coniferous forests, meadows and seeps, and upper montane coniferous forests. This species often occurs in serpentine soils and along roadsides. The elevational range for the species is between 1,300 and 7,500 feet. The flowering period is from June through July or August.	Yes	No	No	Although marginally suitable habitat for the pink-margined monkeyflower may be present in the study area, the species was not observed during the botanical survey and is not expected to be present.
Rattlesnake fern *Botrychium virginianum*	2B.2	Rattlesnake fern is a perennial herb that prefers mesic environments in bogs and fens, lower montane coniferous forests, meadows and seeps, riparian forests, and even streams. The species has been recorded between elevations of 2,300 and 4,500 feet.	No	No	No	No suitable habitat for rattlesnake fern is present in the project area. Additionally, this 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 is a perennial herb that occurs in lower montane coniferous forest, particularly in areas with serpentine soils. The species has been recorded between the elevations of 3,200 and 6,800 feet. The flowering period is from May through August.	No	No	No	The project area does not contain serpentine soils. Scott Mountain bedstraw was not observed during the botanical survey and is not expected to be present.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Scott Mountain sandwort *Minuartia stolonifera*	1B.3	Scott Mountain sandwort is a perennial stoloniferous herb that occurs in lower montane coniferous forests, in areas with serpentine soils. The species has been recorded between 4,100 and 4,600 feet in elevation. The flowering period is from May through August.	No	No	No	The project area is outside the known elevational range of the species and does not contain serpentine soils as preferred by Scott Mountain sandwort. This 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 is an annual herb that occurs on serpentine soils in closed-cone coniferous forests, lower montane coniferous forests, subalpine coniferous forests, and upper montane coniferous forests. The known elevational range of the species is between 2,600 and 8,000 feet. The flowering period is from April through June.	No	No	No	The project area does not contain serpentine soils. Scott Valley phacelia. was not observed during the botanical survey and is not expected to be present.
Shasta chaenactis *Chaenactis suffrutescens*	1B.3	Shasta chaenactis occurs on rocky open slopes, cobbly river terraces, and along roadcuts. The species is found between 2,400 and 8,800 feet in elevation. The flowering period is May through September.	Yes	No	No	According to CNDDB records, the closest reported occurrence of Shasta chaenactis is ±2.6 miles northwest of the project site. Although marginally suitable habitat for Shasta chaenactis is present on the project site, Shasta chaenactis was not observed during the botanical survey and is not expected to be present.
Shasta orthocarpus *Orthocarpus pachystachyus*	1B.1	Shasta orthocarpus is an annual herb that occurs in Great Basic scrub, meadows and seeps, and valley and foothill grassland habitats. The known elevational range of the species is between 2,700 and 2,800 feet. The flowering period is May.	No	No	No	No habitat for Shasta orthocarpus is present in the project area. This species was not observed during the botanical survey and is not expected to be present,
Showy raillardella *Raillardella pringlei*	1B.2	Showy raillardella is a perennial rhizomatous herb that occurs in mesic and serpentine areas of bogs and fens, meadows and seeps, and upper montane coniferous forests. The species is found between the elevations of 3,900 and 7,600 feet. The flowering period is from July through September.	No	No	No	The project area is outside the known elevational range of showy raillardella. Additionally, the species was not observed during the botanical survey and is not expected to be present.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Silky balsamroot *Balsamorhiza sericea*	1B.3	Silky balasamroot is a perennial herb that occurs in serpentine soils of lower montane coniferous forests. The known elevational range of the species is between 2,700 and 7,000 feet. The flowering period is from April through May.	No	No	No	The project area does not contain serpentine soils as preferred by the silky balsamroot. The species was not observed during the botanical survey and is not expected to be present.
Siskiyou clover *Trifolium siskiyouense*	1B.1	Siskiyou clover is a perennial herb that occurs in meadows and seeps, and sometimes along streambanks. The species has been recorded between 2,800 and 5,000 feet. The flowering period is from June through July.	Yes	No	No	Although marginally suitable habitat for the Siskiyou clover exists in the project site, the species was not observed during the botanical survey and is not expected to be present.
Siskiyou fireweed *Epilobium siskiyouense*	1B.3	Siskiyou fireweed is a perennial herb that occurs in rocky, serpentine soils, in subalpine and upper montane coniferous forests, and in alpine boulder and rock fields. The species has been recorded between elevations of 5,500 and 8,200 feet. The flowering period is from July through September.	No	No	No	No serpentine or rock outcrops are present in the project area to provide suitable habitat. Additionally, the project area is below the known elevational range of the species. Siskiyou fireweed was not observed during the botanical survey and is not expected to be present.
Siskiyou phacelia *Phacelia leonis*	1B.3	Siskiyou phacelia is an annual herb that is often found in serpentine soils of meadows and seeps, and openings in upper montane coniferous forests. The species is known to occur between 3,900 and 6,600 feet in elevation. The flowering period is from June through August.	No	No	No	The project area is below the known elevational range of the species and lacks serpentine soils as preferred by the Siskiyou phacelia. The species was not observed during the botanical survey and is not expected to be present.
Snow fleabane daisy *Erigeron nivalis*	2B.3	Snow fleabane daisy, a perennial herb, occurs in alpine boulder and rock fields, on rocky volcanic substrates, and in association with meadows and seeps. The species is reported between 5,600 and 9,600 feet in elevation. The flowering period is July and August.	No	No	No	No potentially suitable habitat for snow fleabane daisy 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 reported between 4,000 and 6,300 feet in elevation. The flowering period is July and August.	No	No	No	According to CNDDB records, subalpine aster was reported in the general project vicinity in 1936. No suitable habitat for subalpine aster is present on the project site. The species was not observed and is not expected to be present.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Trinity buckwheat *Eriogonum alpinum*	1B.2	Trinity buckwheat is a perennial rhizomatous herb that prefers serpentine and rocky areas in subalpine and upper coniferous forests, and alpine boulder and rock fields. The species is reported between 7,100 and 9,600 feet in elevation and flowers from June through September.	No	No	No	Trinity buckwheat occurs at higher elevation than are present in the project area. The species was not observed during the botanical survey and is not expected to be present.
Waldo daisy *Erigeron bloomer* var. *nudatus*	2B.3	Waldo daisy is a perennial herb that occurs in serpentine soils of upper and lower montane coniferous forests. The species is reported between 1,900 and 7,600 feet in elevation. The flowering period is from June through July.	No	No	No	No serpentine soils are present in the project area. Waldo daisy was not observed during the botanical survey and is not expected to be present.
Whitebark pine *Pinus albicaulis*	FC	In California, whitebark pine typically occurs in cold, windy, high elevation sites in the Coast and Cascade ranges and the Sierra Nevada. The species is found at elevations ranging from 6,500 to 12,200 feet.	No	No	No	No potentially suitable habitat for whitebark pine is present on the project site. The species was not observed during the botanical survey and is not expected to be present.
Woodnymph *Moneses uniflora*	2B.2	Woodnymph is a perennial rhizomatous herb that occurs in broadleaf upland forests and North Coast coniferous forests. The species is recorded between 300 and 3,600 feet in elevation. The flowering period is from May through August.	No	No	No	Suitable habitat for this species does not exist in the project area. Woodland nymph was not observed during the botanical survey and is not expected to be present.
Woolly balsamroot *Balsamorhiza lanata*	1B.2	Woolly balsamroot occurs in open areas and grassy slopes in cismontane woodland in Siskiyou County. The species is reported between 2,600 and 6,300 feet. The flowering period is April through June.	Yes	No	No	According to CNDDB records, woolly balsamroot was reported ±0.3 miles west of the project site and in other locations in the general vicinity of Weed. Although marginally suitable habitat for woolly balsamroot is present in the project site, the species was not observed during the botanical survey and is not expected to be present.
Yellow willowherb *Epilobium luteum*	2B.3	Yellow willowherb is a perennial stoloniferous herb that occurs along streams and seeps in lower montane coniferous forests, and in montane meadows. The species has been reported between 4,900 and 7,200 feet in elevation. The flowering period is July through September.	No	No	No	The elevational range of the project area is well below the known range of the yellow willowherb. The species was not observed during the botanical survey and is not expected to be present.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
BIRDS						
Northern spotted owl *Strix occidentalis caurina*	FT, ST, SSSC	Northern spotted owls inhabit dense, old-growth coniferous forest stands with large trees and a complex array of vegetation types, sizes, and ages. Nesting occurs in dense forests, well protected from open sky. The species may use a broken-off treetop or tree-trunk hollow, a mistletoe tangle, or an old nest left behind by a squirrel or a bird of prey. The species is reported from sea level to approximately 7,600 feet in elevation.	No	No	No	USFWS staff conducted a field review of the site in 2005 and determined that no nesting/roosting habitat is present on or near the project site, and that the site does not provide functional foraging habitat. Therefore, the species is not expected to be present.
Yellow-billed cuckoo and Western yellow-billed cuckoo *Coccyzus americanus and Coccyzus americanus occidentalis*	FT, SE	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	According to CNDDB records, yellow-billed cuckoo has been reported in two locations in Siskiyou County. The closest reported occurrence is approximately 3.7 miles northwest of the project area. No suitable nesting habitat for the yellow-billed cuckoo is present on the project site. Thus, yellow-billed cuckoo would not nest on the project site.
AMPHIBIANS						
Cascades frog *Rana cascadae*	SCE, SSSC	In the Klamath Mountains and southern Cascades of Northern California, the Cascades frog is typically found above 5,000 feet in elevation, but may occur as low as 4,000 feet. Cascades frogs inhabit alpine lakes, inlet and outlet streams to mountain lakes, ponds, and meadows. Breeding occurs between March and mid-August in standing water lacking predatory fish. Adults are typically found in open, sunny areas along shorelines that provide basking and foraging opportunities; they can occasionally move between basins by crossing over mountain ridges.	No	No	No	No suitable habitat for the Cascades frog is present on the project site. The Cascades frog would thus not be present on the project site.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Oregon spotted frog *Rana pretiosa*	FT, SSSC	Oregon spotted frogs are typically found in or near a perennial body of water that includes zones of shallow water and abundant emergent or floating aquatic plants, which the frogs use as basking sites and for escape cover. The frog prefers large, warm marshes (minimum size of ±9 acres), and is thought to be extirpated from California.	No	No	No	No suitable habitat for the Oregon spotted frog is present on the project site. The Oregon spotted frog would thus not be present on the project site.
INVERTEBRATES						
Conservancy fairy shrimp *Branchinecta conservatio*	FE	Conservancy fairy shrimp inhabit large, cool-water vernal pools with moderately turbid water.	No	No	No	No vernal pools or other potentially suitable habitats for Conservancy fairy shrimp are present in the project site. Conservancy fairy shrimp would thus not be present.
Vernal pool fairy shrimp *Branchinecta lynchi*	FT	Vernal pool fairy shrimp inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump or basalt-flow depression pools.	No	No	No	No vernal pools or other potentially suitable habitats for vernal pool fairy shrimp are present in the project site. Vernal pool fairy shrimp would thus not be present.
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.
FISH						
Lost River sucker *Deltistes luxatus*	FE, SE, SFP	The Lost River sucker is native to the Lost River and Upper Klamath River, and is adapted to lakes within these watersheds. In lakes and reservoirs, adult suckers prefer shallow water with vegetation. Spawning occurs from late February to early May. Lake populations spawn in tributary streams, or around springs near the shoreline. River populations spawn in riffles or runs with gravel or cobble substrate, moderate flow, and at depths less than four feet.	No	No	No	The project site is well outside the range of the Lost River sucker; thus, the species would not be present.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Lower Klamath marbled sculpin *Cottus klamathensis polyporus*	SSSC	Lower Klamath marbled sculpin is common in the Klamath River drainage from Iron Gate Dam downstream to the mouth of the Trinity River. Although habitat requirements of this species are not well documented, the fish seem to associate with coarse substrates (cobble and gravel) where water velocities range from slow to swift and in streams with widths greater than 20 meters. Spawning occurs from late February to early May. Adhesive eggs are deposited in clusters in nests under flat rocks.	No	No	No	No suitable habitat for the Lower Klamath marbled sculpin is present on the project site. The Lower Klamath marbled sculpin would thus not be present on the project site.
Shortnose sucker *Chasmistes brevirostris*	FE, SE, SFP	The shortnose sucker is known to inhabit Upper Klamath Lake and its tributaries, the Lost River, Clear Lake, Gerber Reservoir, the Tule Lake sump, and the Klamath River upstream of Keno. Spawning occurs from early April to early May. Lake populations spawn in tributary streams, or around springs near the shoreline. River populations spawn in riffles or runs with gravel or cobble substrate, moderate flow, and at depths less than four feet.	No	No	No	The project site is located well outside the range of the shortnose sucker; thus, the species would not be present.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Mammals						
Fisher - West Coast DPS *Pekania pennanti*	SSSC*	Fishers inhabit mixed-conifer forests dominated by Douglas-fir, as well as higher elevation fir and pine forests, and mixed evergreen/broadleaf forests. Suitable habitat for fishers consists of large areas of mature, dense forest stands with greater than 50 percent canopy closure; high canopy cover, large diameter trees, large snags, and large downed logs are important habitat elements. Fishers den in cavities in large trees, snags, logs, rocky areas, or shelters provided by slash or brush piles. Fishers are very sensitive to human activities. Den sites are most often found in areas with no human disturbance.	No	No	No	CNDDB records show that fishers were reported ±2.5 miles to the south and ±6.5 miles to the west of the project site in the 1980's. Although it is possible that a fisher could pass through the project area, fishers would not den in the study area due to the high level of human activity.
Gray wolf *Canis lupus*	FE, SE	Gray wolves are habitat generalists and populations can be found in any type of habitat in the Northern Hemisphere from about 20° latitude to the polar ice pack. Key components of preferred wolf habitat include a year-round abundance of natural prey, secluded denning and rendezvous sites, and sufficient space with minimal human disturbance. Den sites are often near water, and are usually elevated. 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	A gray wolf pack, known as the "Shasta Pack" became established in southeastern Siskiyou County in 2015, but is not currently thought to exist. According to CDFW (July 2019), known resident gray wolf territories are presently limited to Lassen and Plumas counties. Therefore, it is highly unlikely that gray wolves would be present in the project area.

* The Southern Sierra Nevada DPS of fishers is State listed as Threatened and federally listed as Endangered. The Northern California/Southern Oregon DPS is a State Species of Special Concern.

Potential for Special-Status Species to Occur on the Project Site

December 2020

COMMON NAME/ SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
North American wolverine *Gulo gulo luscus*	FPT, ST, SFP	Wolverines are dependent on areas in high mountains, near the tree-line, where conditions are cold year-round and snow cover persists well into May. Females 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 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	According to CNDDB records, undocumented reports of wolverine in Siskiyou County were made in the 1980s. Most recently, a wolverine was detected by camera trap in Nevada County in 2014. Wolverines have not been observed in Siskiyou County for decades; therefore, it is not anticipated that the species would be present.

[1] Status Codes

Federal:

FE Federally Listed – Endangered
FT Federally Listed – Threatened
FC Federal Candidate Species
FP Federal Proposed Species
FD Federal Delisted
FPT Federal Proposed Threatened

State:

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

Rare Plant Rank

1A Plants Presumed Extinct in California
1B Plants Rare, Threatened or Endangered in California and Elsewhere
2A Presumed extirpated in California, but more common elsewhere
2B Rare or Endangered in California, but more common elsewhere

Rare Plant Threat Rank

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

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: December 11, 2020
Consultation Code: 08EYRE00-2021-SLI-0026
Event Code: 08EYRE00-2021-E-00062
Project Name: College of the Siskiyous Facility Master Plan Update

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

To Whom It May Concern:

The enclosed species list identifies federally threatened, endangered, and proposed species, designated critical habitat, and candidate species 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.). Please note that this list does not reflect State listed species or fulfill requirements related to any California Department of Fish and Wildlife consultation. Additionally, this list does not include species covered by the National Marine Fisheries Service (NMFS). For NMFS species please see the related website at the following link:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

If your project does not involve Federal funding or permits and does not occur on Federal land, we recommend you review this list and determine if any of these species or critical habitat may be affected. If you determine that there will be no effects to federally listed or proposed species or critical habitat, there is no need to coordinate with the Service. If you think or know that there will be effects, please contact our office for further guidance. We can assist you in incorporating measures to avoid or minimize impacts, and discuss whether permits are needed.

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 effects to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be

completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

If wetlands, springs, or streams are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html).

Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://

www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

The table below outlines lead Service field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project. Please send any documentation regarding your project to that office. Please note that the lead Service field office for your consultation may not be the office listed above in the letterhead. Please visit the following link to view a map of Service field office jurisdictional boundaries:

http://www.fws.gov/yreka/specieslist/JurisdictionalBoundaryES_R8_20150313.pdf

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of the letter you submit to our office along with any request for consultation or correspondence about your project.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*
Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO
Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO

Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO
Del Norte	All	All	AFWO
El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Humboldt	All except Shasta Trinity National Forest	All	AFWO
Humboldt	Shasta Trinity National Forest	All	YFWO
Lake	Mendocino National Forest	All	AFWO
Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)

Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Modoc	Modoc National Forest	All	KFWO
Modoc	BLM Alturas Resource Area	All	KFWO
Modoc	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Modoc	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Modoc	All other ownerships	All	By jurisdiction (See map)
Mono	Inyo National Forest	All	RFWO
Mono	Humboldt Toiyabe National Forest	All	RFWO
Napa	All ownerships but tidal/estuarine	All	SFWO
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)
Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO

Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO
San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO
Shasta	BLM Alturas Resource Area	All	KFWO
Shasta	Caltrans	By jurisdiction	SFWO/AFWO

Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Siskiyou	Klamath National Forest (except Ukonom District)	All	YFWO
Siskiyou	Six Rivers National Forest and Ukonom District	All	AFWO
Siskiyou	Shasta Trinity National Forest	All	YFWO
Siskiyou	Lassen National Forest	All	SFWO
Siskiyou	Modoc National Forest	All	KFWO
Siskiyou	Lava Beds National Volcanic Monument	All	KFWO
Siskiyou	BLM Alturas Resource Area	All	KFWO
Siskiyou	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Siskiyou	All other ownerships	All	By jurisdiction (see map)
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)

Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
Tehama	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Trinity	BLM	All	AFWO
Trinity	Six Rivers National Forest	All	AFWO
Trinity	Shasta Trinity National Forest	All	YFWO
Trinity	Mendocino National Forest	All	AFWO
Trinity	BIA (Tribal Trust Lands)	All	AFWO
Trinity	County Government	All	AFWO
Trinity	All other ownerships	All	By jurisdiction (See map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO

***Office Leads:**

AFWO=Arcata Fish and Wildlife Office

BDFWO=Bay Delta Fish and Wildlife Office

KFWO=Klamath Falls Fish and Wildlife Office

RFWO=Reno Fish and Wildlife Office

YFWO=Yreka Fish and Wildlife 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

Consultation Code: 08EYRE00-2021-SLI-0026

Event Code: 08EYRE00-2021-E-00062

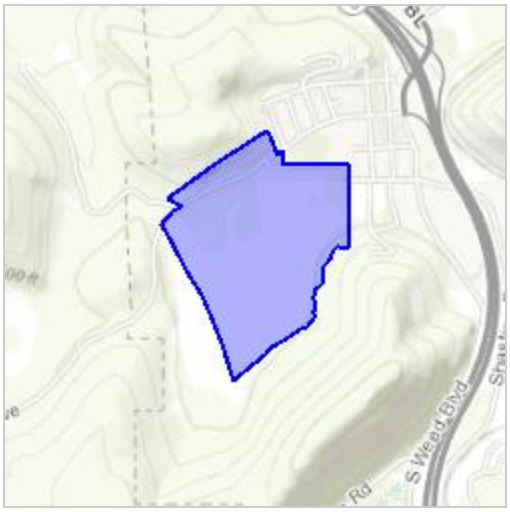
Project Name: College of the Siskiyous Facility Master Plan Update

Project Type: LAND - MANAGEMENT PLANS

Project Description: The College of the Siskiyous (COS) Facility Master Plan update identifies improvements needed to accommodate current and future programs. The Master
Plan identifies renovations, improvements, and new construction on the Weed
Campus property. Improvements include demolishing obsolete structures; constructing additional student housing, tactical and emergency services training
facilities, athletic program facilities, and academic buildings; renovating/ expanding
existing buildings; and constructing a solar field. The purpose of the project is to
improve facilities, increase efficiency, enhance sustainability, resolve overbuilt
status, and update technology.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/41.41134355368866N122.39153303109562W



Counties: Siskiyou, CA

Endangered Species Act Species

There is a total of 9 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.

Birds

NAME	STATUS
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location is outside 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 **proposed** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Amphibians

NAME	STATUS
Oregon Spotted Frog *Rana pretiosa* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6633	Threatened

Fishes

NAME	STATUS
Lost River Sucker *Deltistes luxatus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5604	Endangered
Shortnose Sucker *Chasmistes brevirostris* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7160	Endangered

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Conifers and Cycads

NAME	STATUS
Whitebark Pine *Pinus albicaulis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1748	Proposed Threatened

Critical habitats

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

TABLE 1
CNDDB Report Summary

December 2020

ANIMALS – 5-Mile Radius of Project Area					
Listed Element	**Quadrangle [1]**				**Status [2]**
	CMS	H	ME	W	
Cascades frog				•	SCE, SSSC
Fisher – West Coast DPS			•		FE, ST, SSSC *
Gray-headed pika		•			None
Lower Klamath marbled sculpin				•	SSSC
North American porcupine		•		•	None
Silver-haired bat				•	None
Siskiyou hesperian				•	None
Wawona riffle beetle				•	None
Western yellow-billed cuckoo				•	FT, SE

PLANTS – 9-Quadrangle Query Area										
Listed Element	**Quadrangle [1]**									**Status [2]**
	CHM	CMS	G	H	JF	LS	ME	SCM	W	
Aleppo avens		•								2B.2
Alkali hymenoxys	•		•	•	•				•	2B.2
Blue alpine phacelia	•									2B.3
Brittle prickly-pear						•				2B.1
Broad-nerved hump		•								2B.2
Canadian buffalo-berry	•									2B.1
Cascade grass-of-Parnassus							•			2B.2
Cascade stonecrop	•									2B.3
Coast fawn lily									•	2B.2
Cooke's phacelia					•					1B.1
Crested potentilla							•	•		1B.3
Gasquet rose		•								1B.3
Golden alpine draba							•	•		1B.3
Great Basin claytonia							•	•		2B.3
Green yellow sedge	•									2B.3
Hairy marsh hedge-nettle						•				2B.3
Henderson's triteleia									•	2B.2
Jepson's dodder		•		•						1B.2
Klamath manzanita								•		1B.2
Little hulsea							•			2B.3
Little-leaved huckleberry	•						•			2B.2
Marsh skullcap		•								2B.2
Modoc green-gentian	•		•	•				•		2B.3

Listed Element	Quadrangle [1]									Status [2]
	CHM	CMS	G	H	JF	LS	ME	SCM	W	
Mt. Eddy draba				•	•		•	•		1B.3
Mt. Eddy sky pilot							•			1B.2
Mt. Shasta sky pilot				•						1B.2
Northern adder's-tongue		•								2B.2
Oregon fireweed		•					•			1B.2
Pallid bird's-beak		•		•					•	1B.2
Peck's lomatium							•		•	2B.2
Pickering's ivesia	•								•	1B.2
Pink-margined monkeyflower							•	•		1B.3
Rattlesnake fern		•								2B.2
Scott Mountain bedstraw	•						•	•		1B.2
Scott Mountain sandwort	•									1B.3
Scott Valley phacelia	•							•		1B.2
Shasta chaenactis	•	•					•	•	•	1B.3
Shasta orthocarpus	•		•	•	•	•				1B.1
Showy raillardella							•	•		1B.2
Silky balsamroot							•	•		1B.3
Siskiyou clover		•								1B.1
Siskiyou fireweed							•	•		1B.3
Siskiyou phacelia							•			1B.3
Snow fleabane daisy				•						2B.3
Subalpine aster	•	•		•			•	•	•	2B.3
Trinity buckwheat							•	•		1B.2
Waldo daisy	•							•		2B.3
Wood nymph		•								2B.2
Woolly balsamroot	•	•			•	•	•		•	1B.2
Yellow willowherb	•									2B.3

Highlighting denotes the quadrangle in which the project site is located

* *The Southern Sierra Nevada DPS of fishers is State listed as Threatened and federally listed as Endangered. The Northern California/Southern Oregon DPS is a State Species of Special Concern.*

[1]QUADRANGLE CODE

CHM	China Mountain	LS	Lake Shastina
CMS	City of Mount Shasta	ME	Mount Eddy
G	Gazelle	SCM	South China Mountain
H	Hotlum	W	Weed
JF	Juniper Flat		

[2]STATUS CODES

Federal

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

State

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

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
CNPS Report Summary

9-Quadrangle Query Area
December 2020

Listed Element	Quadrangle [1]									Status [2]
	CHM	CMS	G	H	JF	LS	ME	SCHM	W	
PLANTS										
Aleppo avens		•								2B.2
Alkali hymenoxys	•		•			•			•	2B.2
Blue alpine phacelia	•									2B.3
Brittle prickly-pear						•				2B.1
Broad-nerved hump moss		•								2B.2
Canadian buffalo-berry	•									2B.1
Cascade grass-of-Parnassus							•			2B.2
Cascade stonecrop	•									2B.3
Coast fawn lily									•	2B.2
Cooke's phacelia					•	•				1B.1
Crested potentilla	•	•					•			1B.3
Gasquet rose		•								1B.3
Golden alpine draba							•	•		1B.3
Great Basin claytonia							•	•		2B.3
Green yellow sedge	•									2B.3
Hairy marsh hedge-nettle						•				2B.3
Henderson's triteleia									•	2B.2
Klamath manzanita								•		1B.2
Klamath sedge	•									1B.2
Little hulsea							•			2B.3
Little-leaved huckleberry	•						•			2B.2
Marsh skullcap		•								2B.2
Modoc green-gentian				•						2B.3
Mt. Eddy draba		•					•	•		1B.3
Mt. Eddy sky pilot							•			1B.2
Mt. Shasta sky pilot				•						1B.2
Northern adder's-tongue		•								2B.2
Oregon fireweed		•					•			1B.2
Pallid bird's-beak	•	•		•			•		•	1B.2
Peck's lomatium				•			•		•	2B.2
Pickering's ivesia	•								•	1B.2
Pink-margined monkeyflower							•	•		1B.3
Rattlesnake fern		•								2B.2
Scott Mountain bedstraw	•						•	•		1B.2
Scott Mountain sandwort	•									1B.3
Scott Valley phacelia	•							•		1B.2
Shasta chaenactis	•	•	•				•	•	•	1B.3

Listed Element	Quadrangle [1]									Status [2]
	CHM	CMS	G	H	JF	LS	ME	SCHM	W	
Shasta orthocarpus	•		•							1B.1
Showy raillardella							•	•		1B.2
Silky balsamroot	•						•	•		1B.3
Siskiyou clover		•								1B.1
Siskiyou fireweed							•	•		1B.3
Siskiyou phacelia							•			1B.3
Snow fleabane daisy				•						2B.3
Subalpine aster							•			2B.3
Trinity buckwheat							•	•		1B.2
Waldo daisy	•							•		2B.3
Woodynymph		•								2B.2
Woolly balsamroot	•	•	•		•	•	•		•	1B.2
Yellow willowherb	•									2B.3

Highlighting denotes the quadrangle in which the project site is located

[1]QUADRANGLE CODE

CHM	China Mountain	LS	Lake Shastina
CMS	City of Mount Shasta	ME	Mount Eddy
G	Gazelle	SCHM	South China Mountain
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[2]STATUS CODES

Federal

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Rare Plant Rank

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Rare Plant Threat Ranks

0.1 Seriously Threatened in California

0.2 Fairly Threatened in California

0.3 Not Very Threatened in California

National Marine Fisheries Services
College of the Siskiyous Facility Master Plan

December 2020

Quad Name **Weed**
Quad Number **41122-D4**

ESA Anadromous Fish

SONCC Coho ESU (Threatened)

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat

Essential Fish Habitat

Coho EFH
Chinook Salmon EFH

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

College of the Siskiyous

April 28, August 15, and August 22, 2020

Adoxaceae	**Muskroot Family**
Sambucus nigra subsp. *caerulea*	Blue elderberry
Anacardiaceae	**Sumac Family**
Rhus aromatica	Skunkbush sumac
Apiaceae	**Carrot Family**
Cymopterus terebinthinus	Turpentine cymopterus
Osmorhiza sp.	Sweet-cicely
Apocynaceae	**Dogbane Family**
Apocynum androsaemifolium	Bitter dogbane
Asclepias speciosa	Showy milkweed
Vinca major	Greater periwinkle
Araceae	**Arum Family**
Lemna sp.	Duckweed
Aristolochiaceae	**Birthwort Family**
Asarum hartwegii	Hartweg's wild ginger
Asteraceae	**Sunflower Family**
Achillea millefolium	Common yarrow
Ageratina occidentalis	Western snakeroot
Agoseris grandiflora	Large-flowered Agoseris
Agoseris retrorsa	Spear-leaved agoseris
Ambrosia artemisiifolia	Annual ragweed
Carduus nutans	Musk thistle
Centaurea solstitialis	Yellow star thistle
Chaenactis douglasii var. *douglasii*	Douglas' dustymaiden
Cichorium intybus	Chicory
Cirsium arvense	Canadian thistle
Cirsium occidentale var. *candidissimum*	Snowy thistle
Cirsium vulgare	Bull thistle
Dieteria canescens var. canescens	Hoary tansy-aster
Ericameria bloomeri	Bloomer's goldenbush
Ericameria nauseosa	White-stemmed rabbitbrush
Erigeron canadensis	Canadian horseweed
Erigeron inornatus var. *inornatus*	California rayless fleabane
Eriophyllum lanatum	Woolly sunflower
Gnaphalium palustre	Western marsh cudweed
Helianthella californica	Helianthella
Helianthus annuus	Common sunflower
Hieracium albiflorum	White-flowered hawkweed
Hypochaeris radicata	Rough cat’s ear
Lactuca serriola	Prickly lettuce
Leucanthemum vulgare	Ox-eye daisy
Pseudognaphalium thermale	Small-headed cudweed
Tanacetum parthenium	Feverfew

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

College of the Siskiyous

Taraxacum officinale	Dandelion
Tragopogon dubius	Goat's beard
Berberidaceae	**Barberry Family**
Berberis aquifolium var. aquifolium	Barberry
Berberis aquifolium var. *dictyota* (?)	Jepson's barberry
Betulaceae	**Birch Family**
Alnus rhombifolia	White alder
Betula sp.	Birch
Boraginaceae	**Borage Family**
Phacelia hastata	White-leaved phacelia
Phacelia heterophylla subsp. *virgata*	Vari-leaf phacelia
Plagiobothrys tenellus	Slender popcorn-flower
Brassicaceae	**Mustard Family**
Alyssum desertorum	Alyssum
Boechera pinetorum	Woodland rockcress
Capsella bursa-pastoris	Shepherd's purse
Cardamine oligosperma	Few-seeded bittercress
Descurainia sophia	Flixweed
Draba verna	Whitlow grass
Isatis tinctoria	Dyer's-woad
Lepidium campestre	English peppergrass
Lunaria annua	Moonwort
Sisymbrium altissimum	Tumble-mustard
Caprifoliaceae	**Honeysuckle Family**
Symphoricarpos albus var. *laevigatus*	Common snowberry
Symphoricarpos mollis	Trailing snowberry
Caryophyllaceae	**Pink Family**
Dianthus armeria subsp. *armeria*	Deptford pink
Holosteum umbellatum subsp. *umbellatum*	Jagged chickweed
Moehringia macrophylla	Large-leaved sandwort
Saponaria officinalis	Bouncing bet
Celastraceae	**Staff-tree Family**
Paxistima myrsinites	Oregon boxwood
Chenopodiaceae	**Goosefoot Family**
Chenopodium album	Lambs quarters
Dysphania botrys	Jerusalem oak
Salsola sp.	Russian-thistle
Cornaceae	**Dogwood Family**
Cornus glabrata	Brown dogwood
Cornus nuttallii	Mountain dogwood

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

College of the Siskiyous

Cupressaceae	**Cypress Family**
Calocedrus decurrens	Incense-cedar
Juniperus occidentalis	Western juniper
Cyperaceae	**Sedge Family**
Carex multicaulis	Many-stemmed sedge
Carex stipata var. *stipata*	Stiped sedge
Scirpus microcarpus	Small-fruited bulrush
Dennstaedtiaceae	**Bracken Family**
Pteridium aquilinum var. *pubescens*	Bracken fern
Equisetaceae	**Horsetail Family**
Equisetum arvense	Common horsetail
Equisetum hyemale subsp. *affine*	Common scouring rush
Ericaceae	**Heath Family**
Arctostaphylos patula	Green-leaved manzanita
Pterospora andromedea	Pinedrops
Pyrola asarifolia ssp. *asarifolia*	Bog wintergreen
Pyrola aphylla	Leafless wintergreen
Euphorbiaceae	**Spurge Family**
Croton setigerus	Dove weed
Euphorbia serpyllifolia subsp. *serpyllifolia*	Thymeleaf sandmat
Fabaceae	**Legume Family**
Acmispon americanus var. *americanus*	Spanish lotus
Acmispon nevadensis var. *nevadensis*	Sierra Nevada lotus
Astragalus californicus	Klamath milkvetch
Cytisus scoparius	Scotch broom
Hosackia crassifolia	Big deervetch
Lathyrus latifolius	Perennial sweet pea
Lupinus sp.	Lupine
Lupinus lepidus var. *sellus*	Stool lupine
Medicago lupulina	Black medick
Melilotus albus	White sweetclover
Trifolium pratense	Red clover
Vicia americana subsp. *americana*	American vetch
Fagaceae	**Oak Family**
Quercus chrysolepis (?)	Canyon live oak
Quercus garryana var. *garryana*	Oregon oak
Quercus kelloggii	California black oak
Garryaceae	**Silk Tassel Family**
Garrya fremontii	Fremont's silk tassel
Geraniaceae	**Geranium Family**
Erodium cicutarium	Red-stemmed filaree

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

College of the Siskiyous

Grossulariaceae	**Gooseberry Family**
Ribes cereum var. *cereum*	Wax currant
Ribes inerme var. *klamathense*	Klamath gooseberry
Ribes nevadense	Pink mountain currant
Hypericaceae	**St. John's-wort Family**
Hypericum perforatum	Klamath weed
Iridaceae	**Iris Family**
Iris sp.	Iris (horticultural)
Juncaceae	**Rush Family**
Juncus balticus subsp. *ater*	Baltic rush
Juncus effusus	Soft rush
Lamiaceae	**Mint Family**
Marrubium vulgare	Horehound
Nepeta cataria	Catnip
Prunella vulgaris var. *lanceolata*	Mountain self-heal
Stachys byzantina	Lamb's-ear
Liliaceae	**Lily Family**
Fritillaria recurva	Scarlet fritillary
Linaceae	**Flax Family**
Linum lewisii	Western blue flax
Malvaceae	**Mallow Family**
Sidalcea sp.	Perennial sidalcea
Montiaceae	**Miner's Lettuce Family**
Calyptridium monospermum	One-seeded pussypaws
Claytonia parviflora subsp. *parviflora*	Small-flowered miner's lettuce
Claytonia rubra subsp. *rubra*	Red-stemmed miner's lettuce
Myrsinaceae	**Myrsine Family**
Lysimachia latifolia	Pacific starflower
Onagraceae	**Evening-Primrose Family**
Chamerion angustifolium	Fireweed
Clarkia rhomboidea	Diamond clarkia
Epilobium brachycarpum	Tall annual willowherb
Epilobium ciliatum subsp. *ciliatum*	Fringed willowherb
Gayophytum heterozygum	Zigzag groundsmoke
Orchidaceae	**Orchid Family**
Platanthera dilata var. *leucostachys*	White bog orchid
Orobanchaceae	**Broom-rape Family**
Castilleja pruinosa	Frosted Indian paintbrush

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

College of the Siskiyous

Pinaceae	**Pine Family**
Abies concolor	White fir
Pinus attenuata	Knobcone pine
Pinus ponderosa	Ponderosa pine
Pseudotsuga menziesii var. *menziesii*	Douglas-fir
Plantaginaceae	**Plantain Family**
Collinsia parviflora	Small-flowered collinsia
Penstemon deustus	Hot-rock beard-tongue
Penstemon speciosus	Royal penstemon
Plantago lanceolata	English plantain
Poaceae	**Grass Family**
Agrostis capillaris	Colonial bentgrass
Bromus carinatus var. *carinatus*	California brome
Bromus inermis	Smooth brome
Bromus tectorum	Downy brome
Dactylis glomerata	Orchard grass
Elymus caput-medusae	Medusahead
Elymus elymoides	Squirreltail
Elymus glaucus	Blue wild rye
Elymus multisetus	Big squirreltail
Holcus lanatus	Common velvet grass
Poa bulbosa	Bulbous bluegrass
Poa compressa	Canadian bluegrass
Poa pratensis subsp. *pratensis*	Kentucky bluegrass
Secale cereale	Rye
Stipa lemmonii var. *lemmonii*	Lemmon's needlegrass
Polemoniaceae	**Phlox Family**
Collomia grandiflora	Large-flowered collomia
Ipomopsis aggregata subsp. *aggregata*	Scarlet-gilia
Leptosiphon bolanderi	Bolander's linanthus
Leptosiphon ciliatus	Whisker brush
Microsteris gracilis	Slender phlox
Polygalaceae	**Milkwort Family**
Polygala cornuta var. *cornuta*	Sierra milkwort
Polygonaceae	**Buckwheat Family**
Eriogonum nudum	Naked buckwheat
Polygonum douglasii	Douglas' knotweed
Rumex acetosella	Sheep sorrel
Rumex obtusifolius	Bitter dock
Ranunculaceae	**Buttercup Family**
Delphinium nudicaule	Red larkspur
Ranunculus repens	Creeping buttercup

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

College of the Siskiyous

Rhamnaceae	**Buckthorn Family**
Ceanothus cuneatus var. *cuneatus*	Buckbrush
Ceanothus prostratus	Squaw carpet
Ceanothus velutinus	Tobacco brush
Frangula rubra (?)	Sierra coffeeberry
Rosaceae	**Rose Family**
Crataegus gaylussacia	Klamath hawthorn
Drymocallis glandulosa	Sticky cinquefoil
Fragaria vesca	Woodland strawberry
Horkelia tridentata	Three-toothed horkelia
Malus pumila	Apple
Physocarpus capitatus	Pacific ninebark
Prunus virginiana var. *demissa*	Western choke-cherry
Purshia tridentata var. *tridentata*	Antelope bush
Pyrus communis	Pear
Rosa woodsii subsp. *ultramontana*	Interior rose
Rubus armeniacus	Himalayan blackberry
Rubus leucodermis	Black-capped raspberry
Rubus parviflorus	Thimbleberry
Sorbus aucuparia	Rowan
Spiraea douglasii	Douglas' spiraea
Rubiaceae	**Madder Family**
Galium aparine	Cleavers
Galium bolanderi	Bolander's bedstraw
Kelloggia galioides	Milk kelloggia
Ruscaceae	**Butcher's Broom Family**
Maianthemum racemosum	Western false Solomon's-seal
Salicaceae	**Willow Family**
Populus balsamifera subsp. *trichocarpa*	Black cottonwood
Salix exigua var. *exigua*	Narrowleaf willow
Salix lasiolepis	Arroyo willow
Sapindaceae	**Soapberry Family**
Acer negundo	Box elder
Scrophulariaceae	**Snapdragon Family**
Verbascum thapsus	Woolly mullein
Themidaceae	**Brodiaea Family**
Dichelostemma capitatum subsp. *capitatum*	Blue dicks
Typhaceae	**Cattail Family**
Typha sp.	Cattail
Urticaceae	**Nettle Family**
Urtica dioica	Stinging nettle

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

College of the Siskiyous

Valerianaceae	**Valerian Family**
Plectritis macrocera	White plectritis
Violaceae	**Violet Family**
Viola odorata	English violet
Viola purpurea	Goosefoot violet
Viola sheltonii	Shelton's violet
Vitaceae	**Grape Family**
Parthenocissus sp.	Virginia creeper
Zygophyllaceae	**Caltrop Family**
Tribulus terrestris	Puncture vine