

DRAFT

**Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

June 2020

Lead Agency:



**Siskiyou County
806 South Main Street
Yreka, California 96097**

Prepared by:



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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DRAFT MITIGATED NEGATIVE DECLARATION SOUTHERN OREGON READY MIX REZONE (Z1804) PROJECT

Project Title/Purpose	Southern Oregon Ready Mix Rezone (Z1804) Project
Lead Agency:	Siskiyou County
Project Proponent:	Southern Oregon Ready Mix
Project Location:	The Project Area is located at 3139 and 3202 Spring Hill Drive in south-central Siskiyou County, north of the City of Mt. Shasta. (<i>Figure 1. Project Vicinity</i> and <i>Figure 2. Site Location</i>). The Project is located in Section 31 of Township 41 North, Range 04 West, (Mount Diablo Base and Meridian). It is also known as Assessor's Parcel Numbers (APNs) 021-071-320 and 021-071-330. The approximate center of the site is located at latitude 41°21' 02" N and longitude 122°20'19" W.
Project Description:	The Proposed Project is for a request to rezone of two existing parcels totaling ±33.5 acres in size from AG-2 (Non-Prime Agriculture) to M-M (Light Industrial). The Project would also create a contractor's yard, a 4,000-square-foot floor shop/office building, a concrete grinding residue washout basin, a truck parking area for company trucks and a storage area for the construction material and items related to construction. The Project would provide a gravel surface for parking areas of the Project site.
Public Review Period:	June 12, 2020 – July 12, 2020

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

CUL-1: If subsurface deposits believed to be cultural or human in origin are discovered during grading and construction activities, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the lead agency

and applicable landowner. The agency shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be eligible for inclusion in the National Register of Historic Places (NRHP) or California Register of Historic Places (CRHR). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to their satisfaction.

- If the find includes human remains, or remains that are potentially human, the archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Siskiyou County Coroner (as per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to their satisfaction.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *Siskiyou County*

GEO-1 If paleontological or other geologically sensitive resources are identified during any phase of Project development, the construction manager shall cease operation at the site of the discovery and immediately notify Siskiyou County. Siskiyou County shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the consulting paleontologist, Siskiyou County shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the Project site while mitigation for paleontological resources is carried out.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *Siskiyou County*

NOI-1: The following best management practices shall be incorporated during Project construction.

- Project construction activities should be limited to daytime hours unless conditions warrant that certain construction activities occur during evening or early morning hours.
- Locate stationary construction equipment as far as possible from the nearby noise-sensitive properties.
- Notify the nearby residence whenever extremely noisy work (e.g., pile driving, use of pneumatic drill) would be occurring.
- Shut off idling equipment.
- Install temporary or portable acoustic barriers around stationary construction noise sources.

Timing/Implementation:

During Project grading and construction activity.

Monitoring/Enforcement:

Siskiyou County

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CONTENTS

Summary	S-1
Mitigation Measures Incorporated into the Project to Avoid Significant Effects	S-1
SECTION 1.0 BACKGROUND	1-1
1.1 Summary.....	1-1
1.2 Introduction.....	1-1
1.3 Project Location and Surrounding Land Uses	1-2
1.4 Environmental Setting.....	1-2
SECTION 2.0 PROJECT DESCRIPTION	2-1
2.1 Project Description	2-1
2.2 Regulatory Requirements, Permits, and Approvals	2-2
SECTION 3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION	3-1
SECTION 4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION.....	4-1
4.1 Aesthetics	4-1
4.2 Agriculture and Forestry Resources.....	4-5
4.3 Air Quality	4-7
4.4 Biological Resources	4-14
4.5 Cultural Resources.....	4-19
4.6 Energy	4-27
4.7 Geology and Soils	4-30
4.8 Greenhouse Gas Emissions	4-37
4.9 Hazards and Hazardous Materials.....	4-39
4.10 Hydrology and Water Quality	4-44
4.11 Land Use and Planning	4-51
4.12 Mineral Resources.....	4-53
4.13 Noise	4-54
4.14 Population and Housing	4-62
4.15 Public Services.....	4-63
4.16 Recreation	4-66
4.17 Transportation.....	4-67
4.18 Tribal Cultural Resources	4-71
4.19 Utilities and Service Systems	4-74
4.20 Wildfire	4-77
4.21 Mandatory Findings of Significance	4-80
SECTION 5.0 LIST OF PREPARERS.....	5-1

SECTION 6.0	BIBLIOGRAPHY	6-1
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Appendix A – Air Quality Emissions Modeling (ECORP Consulting, Inc. January 11, 2019)

Appendix B – Botany Survey Report and Potential Occurrence of Wildlife Species

Appendix C – Greenhouse Gas Emissions Modeling (ECORP Consulting, Inc. January 11, 2019)

Appendix D – Existing Traffic Noise Levels (ECORP Consulting, Inc., January 2019)

LIST OF TABLES

Table 4.3-1. Operation-Related Emissions	4-9
Table 4.4-1. Special-Status Plants Species.....	4-15
Table 4.4-2. Special-Status Wildlife Species	4-15
Table 4.5-1. Documented Investigations within One-Mile Search Radius.....	4-21
Table 4.6-1. Non-Residential Electricity Consumption in Siskiyou County 2013-2017	4-28
Table 4.6-2. Automotive Fuel Consumption in Siskiyou County 2014-2018	4-28
Table 4.6-3. Proposed Project Energy and Fuel Consumption.....	4-29
Table 4.7-1. Project Area Soil Characteristics	4-31
Table 4.8-1. Construction-Related Greenhouse Gas Emissions	4-38
Table 4.8-2. Operational-Related Greenhouse Gas Emissions	4-39
Table 4.11-1. General Plan Maps Analysis	4-53
Table 4.13-1. Typical Noise Levels from Construction Equipment	4-57
Table 4.13-2. Noise Levels at the Nearest Sensitive Receptors from Project Onsite Sources	4-59
Table 4.13-3. Typical Construction Equipment Vibration Levels	4-61
Table 4.17-1. I-5 Traffic Counts – Year 2016.....	4-68
Table 4.17-2. Maximum Daily Volume Thresholds for Roadways.....	4-68
Table 4.19-1. Solid Waste Disposal Facilities Used by the Siskiyou County Integrated Solid Waste Management Regional Agency.....	4-74

LIST OF FIGURES

Figure 1. Regional Location.....	1-3
Figure 2. Site Location	1-4
Figure 3. Surrounding Uses	1-5
Figure 4. Site Plan	1-6
Figure 5. Noise Contours.....	4-60

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AADT	Average Annual Daily Trip
AD	Anno Domini
AG-2	Non-Prime Agriculture
AMSL	Above mean sea level
APE	Area of Potential Effects
APN	Accessor Parcel Number
BIOS	Biogeographic Information and Observation System
BMPs	Best Management Practices
Board	Board of Supervisors
BP	Before present
ca	Circa
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
cfs	Cubic feet per second
CGS	California Geological Survey
CH ₄	Methane
CHRIS	California Historical Resources Information System
CNEL	Community noise equivalent level
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
County	Siskiyou County
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Places
CSU-Chico	California State University, Chico
dBA	Decibels
DMR	Division of Mine Reclamation
DOC	California Department of Conservation
DOF	Department of Finance
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources

LIST OF ACRONYMS AND ABBREVIATIONS

EIR	Environmental Impact Report
fc	Foot-candle
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
General Permit	General Construction Activity Stormwater Permit
GHGs	Greenhouse Gases
GLO	General Land Office
I-5	Interstate 5
IS	Initial Study
ITE	Institute of Transportation Engineers
kWh	Kilowatt hours
Lbs/day	Pounds per day
L _{dn}	Day-night average sound level
L _{eq}	Equivalent continuous sound level
LOS	Level of service
MLD	Most Likely Descendent
M-M	Light Industrial
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zones
MSFPD	Mt. Shasta Fire Protection District
NAHC	Native American Heritage Commission
NCUAQMD	North Coast Unified Air Quality Management District
NEIC	North Central Information Center
NHTSA	National Highway Transportation Safety Administration
N ₂ O	Nitrous oxide
NO ₂	Nitrogen dioxide
NOI	Notice of Intent
NPAB	Northeast Plateau Air Basin
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	Ozone
PM ₁₀ and PM _{2.5}	Particulate Matter
PRC	Public Resource Code
Project/ Proposed Project	Southern Oregon Ready Mix Rezone Project
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCAPCD	Siskiyou County Air Pollution Control District

LIST OF ACRONYMS AND ABBREVIATIONS

SCAQMD	South Coast Air Quality Management District
SO ₂	sulfur dioxide
SRWP	Sacramento River Watershed Program
STAGE	Siskiyou Transit and General Express
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
UCMP	California Museum of Paleontology
USC	U.S. Code
U.S. Census	U.S. Census Bureau
USEPA	Environmental Protection Agency
USGS	U.S. Geological Survey
VMT	Vehicle miles traveled
WRM	Wildland Resource Managers

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SECTION 1.0 BACKGROUND

1.1 Summary

Project Title:	Southern Oregon Ready Mix Rezone Project (Z1804)
Lead Agency Name and Address:	Siskiyou County (County) 806 South Main Street Yreka, California 96097
Lead Agency Contact Person and Phone Number:	Kirk Skierski, Deputy Director of Planning (530) 842-8203
Project Owner	Southern Oregon Ready Mix
Project Location:	The Project Area is located in on Spring Hill Drive in south-central Siskiyou County, north of the City of Mt. Shasta. (<i>Figure 1. Regional Location</i> and <i>Figure 2. Site Location</i>). The Project is located in Section 31 of Township 41 North, Range 04 West (Mount Diablo Base and Meridian). It is also known as APNs 021-071-320 and 021-071-330. The approximate center of the site is located at latitude 41°21' 02" N and longitude 122°20'19" W.
General Plan Designation:	N/A
Zoning:	Existing: AG-2 Non-Prime Agriculture; Proposed: M-M Light Industrial

1.2 Introduction

Siskiyou County is the Lead Agency for this Initial Study, which has been prepared to identify and assess the anticipated environmental impacts of the Southern Oregon Ready Mix Rezone Project (Project or Proposed Project). This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Public Resource Code [PRC], § 21000 et seq.) and State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of Projects over which they have discretionary authority before acting on those Projects. A CEQA Initial Study is generally used to determine which CEQA document is appropriate for a Project (Negative Declaration, Mitigated Negative Declaration [MND], or Environmental Impact Report [EIR]).

1.3 Project Location and Surrounding Land Uses

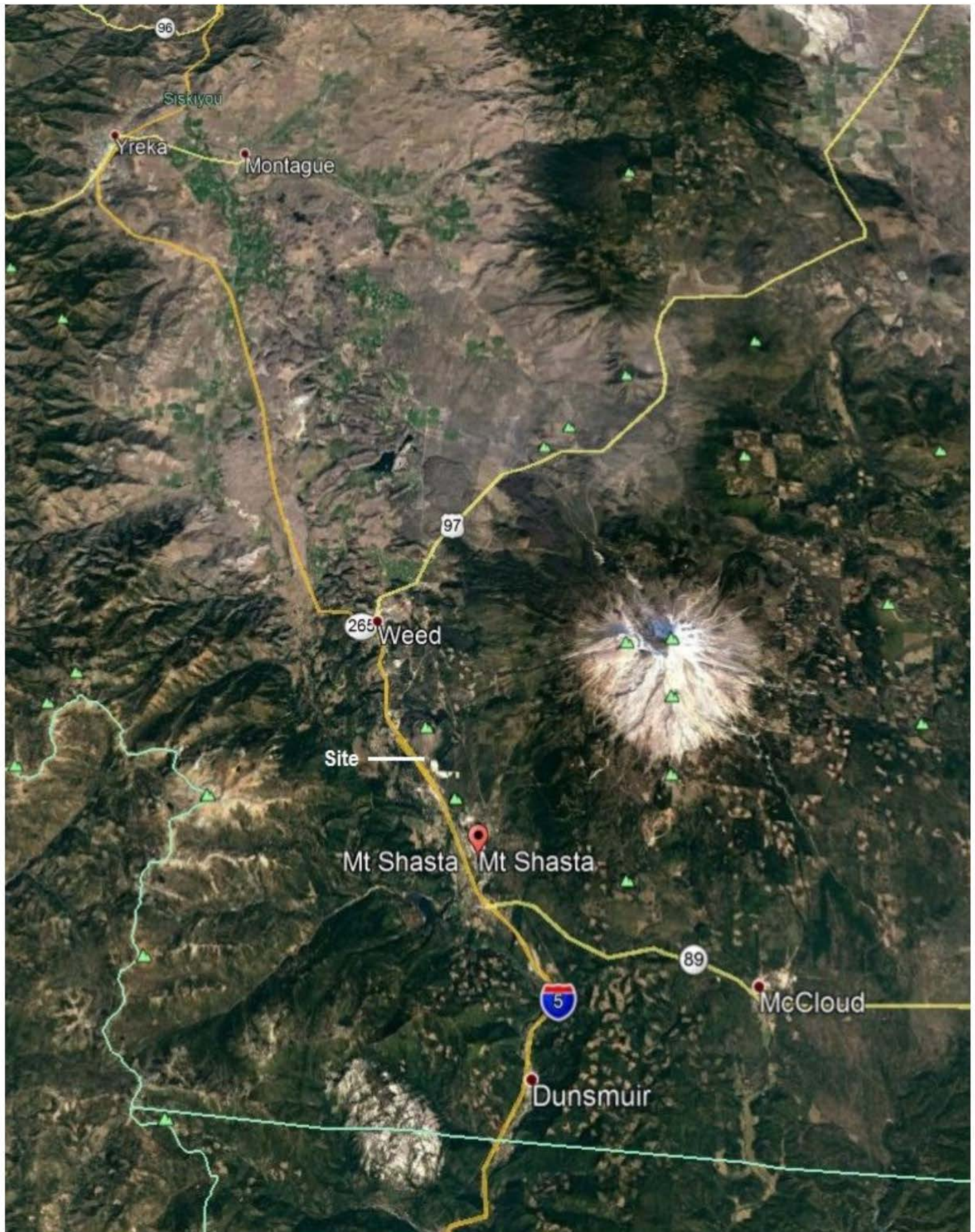
The Project Area is located in on Spring Hill Drive in south-central Siskiyou County, adjacent to the northern boundary for the City of Mt. Shasta, California. As illustrated in *Figure 1. Regional Location* and *Figure 2. Site Location* maps, the Proposed Project is located west of Mt. Shasta, south of Black Butte, east of Interstate 5 (I-5) and adjacent to the City of Mt. Shasta. Adjacent uses include the Black Butte Transfer Station to the east, the Sousa Ready Mix Spring Hill Mine (sand and gravel open pit mine) to the southeast, a trailer storage area, vacant land and Blue Star Gas (propane distributor) to the south, I-5 to the west and three large-lot single family homes to the north. See *Figure 3. Surrounding Uses*. The nearest home is approximately 185 feet north of the Project site boundary and 650 feet north of the nearest proposed area of development (contractor's yard). See *Figure 4. Site Plan* for the proposed area of development.

1.4 Environmental Setting

The Proposed Project is located in the south-central portion of Siskiyou County in a relatively undeveloped area. This area is zoned AG-2 (Non-Prime Agriculture).

The Project site is located on the southwest flank of Mount Shasta, and the south flank of Black Butte, at an elevation of approximately 3,960 feet. The land area is geologically diverse, being at the junction of two mountain ranges: the Cascade Range to the east, and the Siskiyou Mountains to the west. Storm water in the region generally drains south southwest, ultimately flowing into the Sacramento River. The region's climate is characterized as Mediterranean, with cool, wet winters and hot, dry summers. Contemporary climate has fostered a montane vegetation community which encourages diverse flora and fauna species.

The site is vacant and is dominated by a Sierra mixed conifer forest, composed of pine, juniper, sage, and other brush species, as well as grasses (Genesis Society 2018). Two small hills are on the eastern side of the site and elevation of the site ranges from 3,850 to 3,970 feet above mean sea level (AMSL). There are no lakes, rivers or creeks on the site and the site is split by Spring Hill Drive.



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Regional Location
So. Oregon Ready Mix (Z1804) Project

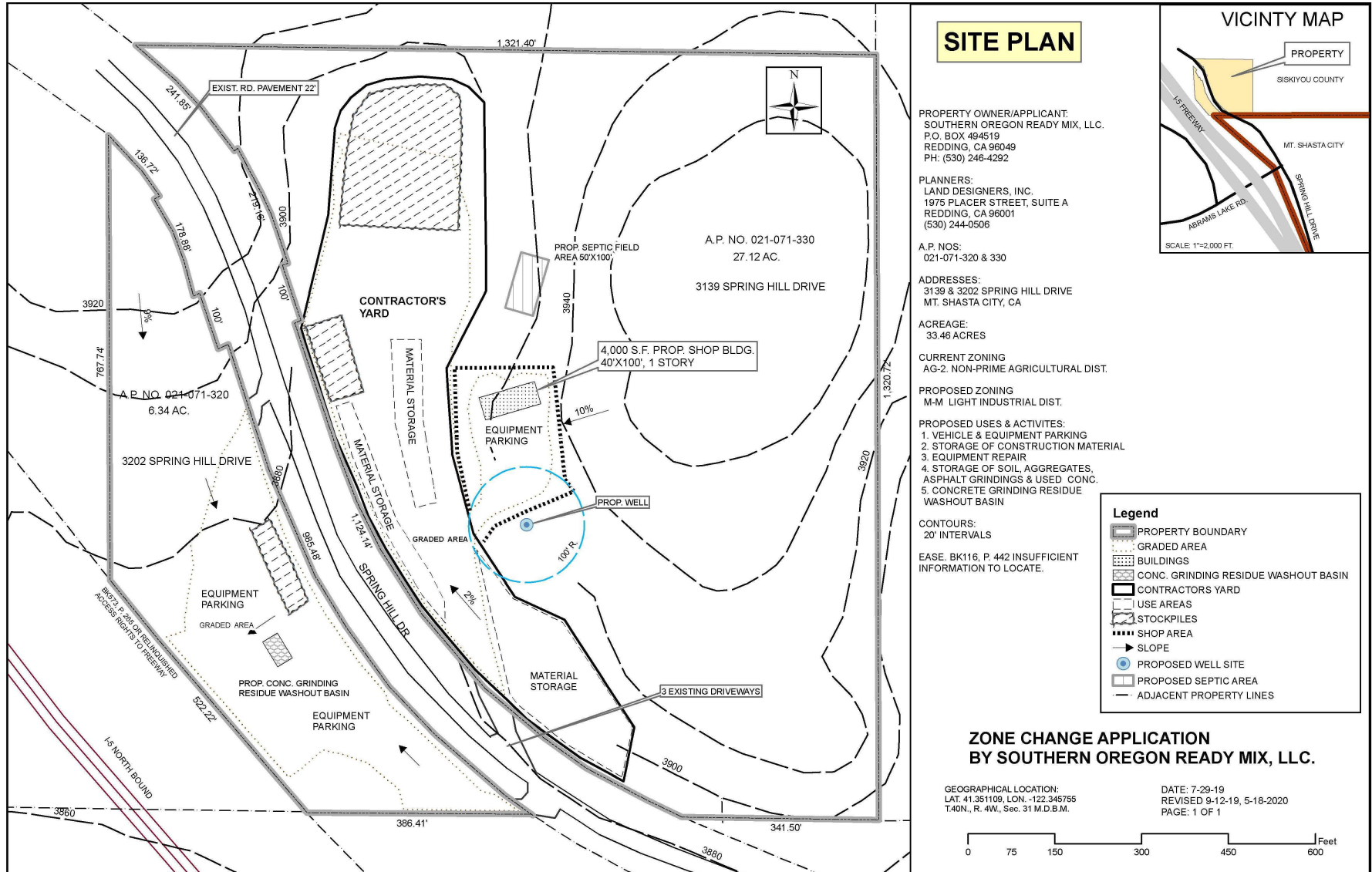


Figure 2. Site Location



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3. Surrounding Uses
So. Oregon Ready Mix (Z1804) Project



SECTION 2.0 PROJECT DESCRIPTION

2.1 Project Description

The Proposed Project is for a request to rezone of two existing parcels totaling ± 33.5 acres in size from AG-2 Non-Prime Agriculture to M-M Light Industrial.

The Project is being developed to provide a materials and vehicle storage area, maintenance area, and concrete grinding residue washout basin for ongoing construction activities. The Project will also include a contractor's yard, a 4,000-square-foot floor shop building, a concrete grinding residue washout basin and areas for concrete crushing and screening. See *Figure 4*.

The contractor's yard is proposed to be located on the eastern side of Spring Hill Road and would occupy approximately six to seven acres. The contractor's yard will be used as a truck parking area for company trucks and a storage area for the construction material and items related to construction. The yard will have a gravel surface for the use and parking areas of the Project site.

As shown in *Figure 4*, east of the contractor's yard will be the proposed 4,000-square-foot shop and office building. The shop will be used to service and repair company vehicles, equipment and machinery. The dimensions for the shop/office building will be approximately 40 by 100 feet and would be a one-story metal building. The area around the building will be graveled. A septic system will be installed to the north of the building to provide wastewater disposal for the building restrooms. A groundwater well is proposed in the area to the south of the shop building.

The concrete grinding residue washout basin is proposed to be located on the west side of Spring Hill Road. The basin will be approximately 60 feet long by 15 feet wide and six feet deep. The amount of concrete grinding residue water to be placed in the basin is estimated at 31,000 gallons. A plastic liner would be used to eliminate water percolation. The basin would be designed to not allow stormwater to enter the basin and to provide a one-foot freeboard to prevent overflow.

Approximately 12.7 acres would be disturbed during grading activities for the site. This would include an estimated 4,000 cubic yards of material to be moved onsite and approximately 21,000 cubic yards of material would be imported. No material will be exported offsite.

2.1.1 Employees and Operations

The typical construction yard operation for the Proposed Project of highway work involves construction activities (generally May through October) and includes two to four employees onsite with the potential for five to ten at the beginning or end of shift. In most cases the field employees park their vehicles at the jobsite and do not travel to the Project site on a daily basis. The majority of the Southern Oregon Ready Mix construction projects will not have an onsite employee at the Project site during working hours as they are on the construction site. During the most recent Caltrans project, the construction yard had two to four people in the yard approximately 15 to 20 percent of the time.

Vehicle trips to the Project site will include two to four pickups in and out of the yard two to six times per day. The majority of trucks bringing materials in and out of the yard will vary greatly on a daily basis

resulting on anywhere from 0 to 30 truck trips. The majority of trucks would be flat bed loads, semi end dumps and bottom dumps. These would be parked overnight at the yard but and be out of the yard during the day.

In order to assist in the controlling of dust from the Project, the applicant proposes the following:

The main dust control measure employed at the site is the gravelling of all ground surfaces in which there is vehicular traffic, storage of materials or the parking of vehicles and equipment. If this measure is insufficient then water can be applied to those surfaces that are generating dust. The water application can be by water truck or water hose depending on the circumstances. An additional measure is the keeping the pavement of Spring Hill Drive at the driveway entrances clean of any tracking of dust by vehicles and equipment by sweeping the impacted surfaces. This sweeping can be by broom or mechanical sweeper.

Dust can be generated by stockpiles if they consist of fine grained materials. Methods to control dust in this instance include covering the stockpile if it is a small quantity and watering the stockpiles surface by sprinkler or hose.

If the above dust control measures are insufficient, there is a variety of soil binders on the market that can reduce dust generation from a specific source.

Project Construction Timing

Construction of the contractor's yard, and a concrete grinding residue washout basin is anticipated to begin in August 2020 and be completed within a two week period. The 4,000-square-foot floor shop/office building is anticipated to be constructed sometime in 2020 or 2021.

2.2 Regulatory Requirements, Permits, and Approvals

The following approvals and regulatory permits would be required for implementation of the Proposed Project.

2.2.1 Lead Agency Approval

Siskiyou County is the lead agency for the Proposed Project. In order to approve the Proposed Project, the Siskiyou County Board of Supervisors (Board) must first adopt the proposed rezone, adopt the IS/MND, approve the Proposed Project, and file a Notice of Determination within five working days. The Board will consider the information contained in the document in making its decision to approve or deny the Proposed Project. The document is intended to disclose to the public the Proposed Project's details, analyses of the Proposed Project's potential environment impacts, and identification of feasible mitigation that will reduce potentially significant impacts to less than significant levels.

Other agency approvals include the following:

Central Valley Regional Water Quality Control Board

The Regional Water Quality Control Board (RWQCB) typically requires that a Construction General Permit be obtained for projects that disturb more than one acre of soil. Typical conditions issued with such a

permit include the submittal of and adherence to a stormwater pollution prevention plan (SWPPP), as well as prohibitions on the release of oils, grease, or other hazardous materials.

Siskiyou County Air Pollution Control District

The Proposed Project is located in an area under the jurisdiction of the Siskiyou County Air Pollution Control District (SCAPCD). The Project applicant will be required to obtain the district's approval of a dust control plan prior to any soil-disturbing activities on the site, as well as an Authority to Construct and a Permit to Operate.

2.2.2 Relationship of Project to Other Plans and Projects

Siskiyou County General Plan

The Siskiyou County General Plan is the primary document governing land use development in the county. The Siskiyou County General Plan consists of eight individual Elements. These Elements: Conservation, Energy, Geothermal, Housing, Land Use and Circulation, Noise, Open Space, and Seismic Safety and Safety were adopted at various times from June 1973 (Conservation Element) to the most recent Housing Element which was adopted In August 2014. The General Plan includes numerous goals and policies pertaining to land use, circulation, housing, parks, public facilities and services, open space, cultural resources and historic preservation, safety, energy, and noise.

Siskiyou County Zoning Ordinance

Chapter 6 Zoning of the Siskiyou County Code defines the purpose of the Zoning Ordinance is to protect the public health, safety, peace, morals, comfort, convenience and general welfare of the county's residents. The Zoning ordinance as a number of specified purposes including the following:

- To assist in providing a definite plan of development for the County and to guide, control and regulate future growth of the County in accordance with said plan; and
- To regulate the use of lands, buildings and structures so as to determine, establish, regulate and restrict:
 - the areas within which agriculture, forestry, industry, business and recreation may be conducted,
 - the areas in which residential uses may be permitted, regulated or prohibited.

2.2.3 Consultation with California Native American Tribe(s)

Assembly Bill (AB) 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Proposed Project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the Lead Agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds in writing, within 30 days of receipt of the formal notification, and requests the consultation. Siskiyou County sent notice to Karuk Tribe, Winnemem Wintu Tribe, Torres Martinez Band of

Desert Cahuilla Indians about the Project in October 2018. The County did not receive any consultation request from the Shasta Tribe. None of the tribes requesting consultation provided comments on the Proposed Project. Further information on potential Tribal Cultural Resources in the Project area is provided in Section 4.18 of this Initial Study.

SECTION 3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|-------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Hazards/Hazardous Materials | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use and Planning | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Utilities and Service Systems |
| <input type="checkbox"/> Energy | <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Wildfire |
| <input checked="" type="checkbox"/> Geology and Soils | <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Mandatory Findings of Significance |

Determination

On the basis of this initial evaluation:

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

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

I find that the Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ☐

I find that the Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact 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. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. ☐

I find that although the 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 Project, nothing further is required. ☐



June 10, 2020

Kirk Skierski
Deputy Director of Planning

Date

SECTION 4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

The Project site is situated in an area of sparse development with views of the surrounding mountains including Mt. Shasta, Black Butte and Spring Hill.

The Project site is located on the southwest flank of Mount Shasta, and the south flank of Black Butte. The land area is geologically diverse, being at the junction of two mountain ranges: the Cascade Range to the east, and the Siskiyou Mountains to the west. Storm water in the region generally drains south-southwest, ultimately flowing into the Sacramento River. The region's climate is characterized as Mediterranean, with cool, wet winters and hot, dry summers. Contemporary climate has fostered a montane vegetation community which encourages diverse flora and fauna species.

Visual Character of the Project Site

The site is vacant and is dominated by a Sierra mixed conifer forest, composed of pine, juniper, sage, and other brush species, as well as grasses (Genesis Society 2018). Two small hills are on the eastern side of the site and elevation of the site ranges from 3,850 to 3,970 feet AMSL. There are no lakes, rivers or creeks on the site and the site is split by Spring Hill Drive.

Adjacent uses include the Black Butte Transfer Station to the east, the Sousa Ready Mix Spring Hill Mine (sand and gravel open pit mine) to the southeast, a trailer storage area, vacant land and Blue Star Gas (propane distributor) to the south, I-5 to the west and three large-lot single family homes to the north. See *Figure 3*. The nearest home is approximately 185 feet north of the Project site boundary and 650 feet north of the nearest proposed area of development (contractor's yard). See *Figure 4* for the proposed area of development.

State Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development impacts the enjoyment of the view. The Siskiyou County General Plan Scenic Highways Element (1974) identifies I-5 between the City of Weed and just south of the City of Mt. Shasta as a Scenic Freeway from the State Scenic Highway Master Plan Designated Route. However, while this area is identified as eligible as a state scenic highway, the California Scenic Highway Program has not officially designated this route as a scenic highway (Caltrans 2018).

Lighting

Individuals have a range of reactions to the perceived effects of lighting on the environment. As such, whether light is obtrusive is generally based on perception, but is also a function of the actual amount of light emitted from a source. The following are examples of light levels, expressed in foot-candles (fc):¹

- | | |
|----------------------------|-----------------------------|
| ■ Direct sunlight - 10,000 | ■ Covered parking lot - 5 |
| ■ Full daylight - 1,000 | ■ Gas station canopy - 12.5 |
| ■ Twilight - 1 | ■ Department store - 40 |
| ■ Full moon - 0.1 | ■ Grocery store – 50 |

Typical nighttime street lighting requirements are one to three foot-candles, which is generally considered to be unobtrusive. A typical example of glare effects is the car headlight. When viewed directly in front of a vehicle with the headlights on full beam, vision is impaired, resulting in disabling glare. However, when viewed from the side, the same headlights would not impair vision.

Spill Light

Spill light or light trespass is the light that illuminates surfaces beyond the property line. Typically, spill lighting is from a more horizontal source such as streetlights and way-finding/security lighting than sky glow, which emanates from a more vertical source into the atmosphere. Spill light can be accurately calculated, and the effects of spill light can be measured for general understanding and comparison. However, light that is considered to be obtrusive is a subject of debate. A spill light impact is generally considered significant if the increase in spill lighting would exceed one foot-candle at the property line of the nearest sensitive receptor, sky glow is perceptibly increased, or glare is at a level such that it impairs vision.

Sky Glow

Sky glow is the light that illuminates the sky above the horizon and reflects off of moisture and other tiny particles in the atmosphere. Sky glow would be considered a significant impact if it were a permanent addition to the environment. Control features are available on the light sources to reduce sky glow and glare from nighttime lighting. These control features direct light downward, thereby reducing the spill of light that causes sky glow and reducing glare.

¹ Foot-candle (fc): A unit of measure of the intensity of light falling on a surface, equal to one lumen per square foot and originally defined with reference to a standardized candle burning at one foot from a given surface. One fc = 0.01609696 watts. Source: Engineering Toolbox, n.d.

Glare

Glare can be described as direct or reflected light, which can then result in discomfort or disability. A well-designed lighting system controls light to provide maximum useful on-field illumination with minimal destructive offsite glare.

4.1.2 Aesthetics (I) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Siskiyou County General Plan does not include any policies for the protection of views or identify any view sheds, or scenic vistas that should be protected. However, the Conservation Element does identify that open space, wildlife habitat and scenic beauty are a valuable and necessary resource and conservation of these resources is necessary to continue to attract visitors to the County. Views of Mt. Shasta and Black Butte can be seen from the Project site and surrounding area. While the County General Plan does not identify any scenic vistas, certainly Mt. Shasta and Black Butte would be considered a scenic resource and a provide scenic vistas for the surrounding area.

The only features of the Proposed Project that would be greater than ground height would be the one-story shop/office building, future trucks parked at the site and materials stored at the site. None of these would be greater than one story high. Because of the surrounding hilly terrain and trees, much of these uses would be blocked from public views. Also, because of the enormous size of Mt. Shasta and Black Butte and the location of the nearest public viewing points (i.e., I-5 or residential development west of I-5), it would be virtually impossible to block views of these scenic resources from the Project site. As such, the Project would have a less-than-significant impact on a scenic vista.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project is not located within the vicinity of an officially designated scenic highway. No impact would occur.

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) In a non-urbanized area 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 publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

With full implementation of the Proposed Project, the visual character of the site would change from vacant land to a partially developed area. The Project would be developed on a 33.5 acre site. However, only approximately 1/3 of the site will change from vacant land to developed uses. The remainder will remain as vacant undisturbed land. Much of the disturbed area will be graded which will result in the removal of existing vegetation and replaced with gravel to allow of vehicle parking and material storage. The Project site is located in an area where large swaths of land have been disturbed and removal of all vegetation has occurred (i.e., Black Butte Transfer Station, Springhill Mine and the trailer storage area). While, the Project would change the visual character of the site, this change is consistent with other uses in the area. Additionally, public views of the site are limited due to the surrounding terrain, and vegetation. As such, the Project would not result in a substantial degradation of the existing visual character of the site or surrounding area from a public viewing area. Therefore, the Project would have a less than significant impact on visual character on the site or surrounding area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The only Project lighting would be from the shop/office building. Any outside lighting would be required to follow Section 10-6.5602 of the Siskiyou County Code, which requires that exposed sources of light, glare, or heat be shielded so as not to be directed outside the premises. Adherence to County Code Section 10-6.5602 would ensure that potential impacts associated with light or glare would remain less than significant.

During the daytime certain building materials, such as large expanses of windows, unfinished metal, or reflective finishes, may reflect sunlight resulting in a source of daytime glare. Upon full buildout, the Project would involve the construction and operation of 4,000 square feet of shop/office building, parking lots, and a concrete grinding residues washout basin. None of these uses would include large expanses of windows, unfinished metal, or reflective finishes. As such, the Project would have a less than significant impact.

4.1.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

The California Department of Conservation (DOC) manages the Farmland Mapping and Monitoring Program, which identifies and maps significant farmland. Farmland is classified using a system of five categories including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The classification of farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service (NRCS). The California DOC manages an interactive website, the California Important Farmland Finder. This website program identifies the Project site as being within an area of Farmland of Local Importance (DOC 2018a).

This site is not identified as being under a Williamson Act contract (DOC 2016). The site is zoned AG-2 Non-Prime Agriculture by Siskiyou County. According to the County's Zoning Ordinance, the AG-2 district is intended to provide an area where general agricultural activities and agriculturally related activities can occur. No farming activities existing on the site or within the general area of the Project.

The Project site does contain possible forest or timber resources; however, the site is not located in a forestland protection or timber production area as identified by Siskiyou County. The entirety of the Project would occur on the existing 33.5-acre site. No farmland or timberland uses exist within the vicinity of the Proposed Project.

4.2.2 Agriculture and Forestry Resources (II) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The DOC identifies the Project site as Farmland of Local Importance. As the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), the Project would have no impact in this area.

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This site is not subject to a Williamson Act contract. There are no Williamson Act contract lands within the vicinity of the Project site. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is not located in a forestland protection or timber production area as identified by Siskiyou County or the California Department of Fire and Forestry Protection (CAL FIRE). The Project would have no impact in this area.

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No identified forest lands exist on the Project site or within the vicinity of the Project. The Project would have no impact in this area.

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is identified as Farmland of Local Importance by the DOC, however currently the site is not used for agricultural purposes nor has it been used for this purpose in at least the last 25 years². No existing agricultural uses or forest land exist within the Project vicinity. The Project would have no impact in this area.

4.2.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.3 Air Quality

4.3.1 Environmental Setting

The California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (USEPA) focus on the following criteria pollutants to determine air quality: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead. In Siskiyou County, the majority of criteria pollutant emissions come from mobile sources.

Toxic air contaminants (TACs) are distinguished from criteria air pollutants and are separated into categories of carcinogens and noncarcinogens. Carcinogens, such as diesel particulate matter (DPM), are considered dangerous at any level of exposure. Noncarcinogens, however, have a minimum threshold for dangerous exposure. Common sources of TACs include, but are not limited to: gas stations, dry cleaners, diesel generators, ships, trains, construction equipment, and motor vehicles.

4.3.1.1 Topography and Air Quality

The Project site is located in a region identified as the Northeast Plateau Air Basin (NPAB), which principally includes Siskiyou, Modoc, and Lassen counties. The characteristics of the NPAB and the surrounding region are generally mountainous and rural, buffering them from the influence from outside pollutant transport. This larger air basin is divided into local air districts, which are charged with the responsibility of implementing air quality programs. The local air quality agency affecting the Project area is the SCAPCD. Within the area administered by SCAPCD, the primary sources of air pollution are wood-burning stoves, wildfires, farming operations, unpaved road dust, managed burning and disposal, and motor vehicles. The Project site is currently vacant with the exception of a portable trailer on the eastern side.

The SCAPCD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs and regulates agricultural and nonagricultural burning. Other district responsibilities include monitoring air quality, preparing air quality plans, and responding to citizen air quality complaints.

Ambient Air Quality Standards

Air quality standards are set at both the federal and state levels of government. The federal Clean Air Act requires the USEPA to establish ambient air quality standards for six criteria air pollutants: O₃, CO, NO₂, SO₂, lead, PM₁₀, and PM_{2.5}. The California Clean Air Act also sets ambient air quality standards. The state

² Based on a review of Google Earth aerial maps from 1993 to 2019.

standards are more stringent than the federal standards, and they include other pollutants in addition to those regulated by the federal standards. When the concentrations of pollutants are below the maximum allowed standards in an area, that area is considered to be in attainment of the standards. The County has been designated as an attainment area for all six criteria air pollutants as the air quality meets all state and federal standards.

4.3.2 Air Quality (III) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site lies within the boundaries of the NPAB. While the other counties in the air basin are identified as currently being in nonattainment for exceeding state criteria pollutant levels for particulate matter, the County is identified as being in attainment or unclassified for all federal and state air quality standards (CARB 2018). As such, Siskiyou County is not subject to an air quality plan. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

As noted above, Siskiyou County is in attainment or unclassified for federal and state air quality standards. However, the Proposed Project could result in the emission of criteria air pollutants during construction and operation.

4.3.2.1 Construction Impacts

The Proposed Project would result in short-term emissions from construction activities. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur. Emissions commonly associated with construction activities include fugitive dust from soil disturbance. During construction, fugitive dust, the dominant source of particulate matter emissions, is

generated when wheels or blades disturb surface materials. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities.

Siskiyou County is in attainment or is identified as unclassified for all monitored air quality standards. Additionally, as stated in the Environmental Questionnaire provided by the County of Siskiyou, best management practices (BMPs) for erosion control during construction activities will be applied when appropriate. Once construction of the Project is completed, construction source emissions would cease. Therefore, no cumulative considerable net increase of criteria pollutant will result from Project construction and a less than significant impact would occur.

4.3.2.2 Operational Impacts

Operational air quality impacts would predominantly be associated with motor vehicle use. Thresholds of significance illustrate the extent of an operational impact and are a basis from which to apply mitigation measures. Because the SCAPCD has no established thresholds under CEQA for the assessment of air quality impacts, the North Coast Unified Air Quality Management District's (NCUAQMD) thresholds of significance will be used for the evaluation of operational air quality impacts for the purpose of this analysis. The NCUAQMD administers the air basin directly west of Siskiyou County. These thresholds are consistent with the New Source Review Rule 110 adopted by the Air Quality Management District as required by the California Clean Air Act. The thresholds of significance are summarized in *Table 4.3-1*.

Table 4.3-1. Operation-Related Emissions

Source	Pollutant (maximum pounds per day)				
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
Summer Emissions (Pounds per Day)	0.80	0.75	1.00	0.18	0.05
Winter Emissions (Pounds per Day)	0.80	0.80	1.15	0.18	0.05
<i>NCUAQMD Significance Threshold</i>	<i>50</i>	<i>50</i>	<i>500</i>	<i>80</i>	<i>50</i>
Exceed Threshold?	No	No	No	No	No

Source: Emissions were calculated by ECORP Consulting using CalEEMod 2016.3.2. Refer to Appendix A for Model Data Outputs.

As shown, all criteria pollutant emissions would remain below their respective thresholds during Project operations. Additionally, in order to assist in the controlling of dust from the Project, the applicant proposes the following as ongoing dust control measures during operation of the Project:

The main dust control measure employed at the site is the gravelling of all ground surfaces in which there is vehicular traffic, storage of materials or the parking of vehicles and equipment. If this measure is insufficient, water can be applied to those surfaces that are generating dust. The water application can be by water truck or water hose, depending on the circumstances. An additional measure is keeping the pavement of Spring Hill Drive at the driveway entrances clean of any tracking of dust by vehicles and equipment by sweeping the impacted surfaces. This sweeping can be by broom or mechanical sweeper.

Dust can be generated by stockpiles if they consist of fine-grained materials. Methods to control dust in this instance include covering the stockpile if it is a small quantity and watering the stockpiles surface by sprinkler or hose.

If the above dust control measures are insufficient, there is a variety of soil binders on the market that can reduce dust generation from a specific source.

Thus, cumulative operational air quality impacts are less than significant.

Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptor to the Project site is a residence located approximately 650 feet northwest of the Project area.

4.3.2.3 Construction Impacts

Construction-related activities would result in temporary, short-term Project-generated emissions of DPM exhaust from the use of off-road, heavy-duty diesel equipment. The Project would also result in volatile organic compound emissions from the use of hot asphalt during paving, as well as from the application of architectural coatings. For construction activity, DPM is the primary TAC of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Accordingly, DPM is the focus of this discussion.

Based on the emission modeling conducted, the maximum construction-related daily emissions of exhaust PM_{2.5}, considered a surrogate for DPM, would be 2.32 pounds per day during construction activity (see *Appendix A*). (PM_{2.5} exhaust is considered a surrogate for DPM because more than 90 percent of DPM is less than one microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., PM_{2.5}), according to CARB. Most PM_{2.5} derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) Even during the most intense month of construction, emissions of DPM would be generated from different locations on the Project site, rather than a single location, because different types of construction activities (e.g., site preparation, building construction) would not occur at the same place at the same time. DPM emissions rapidly dissipate and are substantially diluted over short distances by the atmosphere downwind of the emission sources.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-, 30-, or nine-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the Proposed Project. Consequently, an important consideration is that the use of off-road heavy-duty diesel equipment would be limited to the periods of construction, for which most diesel-powered off-road equipment use would occur over an approximately five-month period. Therefore, considering the relatively low mass of DPM emissions that would be generated during even the most intense season of construction, the relatively short duration of construction activities (five months), and the highly dispersive properties of DPM, construction-related TAC emissions would not expose sensitive receptors to substantial amounts of air toxics. The impact is less than significant.

4.3.2.4 Operational Impacts

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the South Coast Air Quality Management District (SCAQMD) 1992 Federal Attainment Plan for Carbon Monoxide (1992) in Southern California can be used to demonstrate the potential for CO exceedances. The South Coast CO hot spot analysis was conducted for four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of

approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the level of service in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be level of service (LOS) E at peak morning traffic and LOS F at peak afternoon traffic. Even with the inefficient LOS and volume of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992).

Because the proposed Project would not increase traffic volumes at any intersection to more than 100,000 vehicles per day, there is no likelihood of the Project traffic exceeding CO values. The impact is less than significant.

Diesel Particulate Matter

The Project proposes the development of a short-term materials and vehicle storage area, maintenance area including a 4,000-square-foot floor shop building, and concrete grinding residue washout basin, and therefore would not include stationary sources of air toxics (i.e., smokestacks). The Project would involve heavy-duty trucks, a source of DPM, as a standard component of operations. According to the California Air Pollution Control Officers Association's (CAPCOA's) Health Risk Assessments for Proposed Land Use Projects (2009), operations that require more than 100 heavy-duty delivery trucks daily are considered a potential health risk from DPM. As previously described, the number of daily vehicle trips to the Project site varies greatly and can be anywhere for 0 to 30 trips during the three- to four-month construction period. However, the Project would not result in 100 heavy-duty trucks daily to the site and therefore would not meet the 100-truck threshold for DPM health risks. In addition, the USEPA and the NHTSA announced fuel economy standards for medium- and heavy-duty trucks, which apply to vehicles in model years 2014–2018. The NHTSA has adopted standards for fuel consumption tailored to each of three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this program will reduce fuel consumption, and thus air pollutant emissions, for affected vehicles by six to 23 percent. While this analysis does not rely on this program for purposes of mitigating impacts, this program should help further reduce the long-term operational impacts of the Project.

The Project would not be a substantial source of TACs and there would a less than significant impact as a result of the Project during operations.

Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

4.3.2.5 Construction Impacts

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would result in a less than significant impact related to odor emissions.

4.3.2.6 Operational Impacts

The land uses generally identified as sources of odors include wastewater treatment plants, wastewater pumping facilities, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing and fiberglass manufacturing facilities, painting/coating operations, rendering plants, coffee roasters, food processing facilities, confined animal facilities, feedlots, dairies, green waste and recycling operations, and metal smelting plants. If a source of odors is proposed to be located near existing or planned sensitive receptors, this could have the potential to cause operational-related odor impacts. The Project does not include any of these land uses or similar land uses. The operational impact is less than significant.

4.3.3 Mitigation Measures

No significant impacts were identified; no mitigation measures are required.

4.4 Biological Resources

The Project site was surveyed and reports completed for special status plant and animal species by Wildland Resource Managers (WRM) in the summer and fall of 2019. The information provided in these reports are used as the basis for the biological analysis provided below. These documents are included as *Appendix B* of this Initial Study.

4.4.1 Environmental Setting

The Proposed Project is located in the south-central portion of Siskiyou County in a relatively undeveloped area. The Project area is located on the southwest flank of Mount Shasta, and the south flank of Black Butte, at an elevation of approximately 3,960 feet. The region's climate is characterized as Mediterranean, with cool, wet winters and hot, dry summers. Contemporary climate has fostered a montane vegetation community which encourages diverse flora and fauna species.

The area is dominated by a Sierra mixed conifer forest, composed of pine (*Pinus* sp.), juniper (*Juniperus* sp.), sage (*Salvia* sp.) and other brush species, as well as grasses (Genesis Society 2018). Mammals common to the area include deer, bear, puma, coyote, badger, rodents and rabbits, while a rich avifauna includes osprey, bald eagle, hawk, owl, woodpecker and quail.

4.4.1.1 Vegetation Communities

Vegetation on this site may be characterized as manzanita-shrub with green leaf manzanita (*Arctostaphylos patula*) dominating the species composition. The shrub canopy cover exceeds 95 percent with the manzanita comprising 85+ percent of that total. Interspersed with the manzanita is bitterbrush (*Purshia tridentata*), which makes up about 10 percent. Squaw carpet is found underneath the shrub layer along with scattered grasses and forbs being present where sunlight can penetrate to the surface soils. Rabbit brush (*Ericameria nauseosa*) is found along the edges of shrub field. Generally, the shrub field averages four to five feet in height and is extremely compacted and difficult to penetrate. The shrub layer may be characterized as mature to declining as decadency comprises nearly 50 percent of the shrub volume.

There are several species of trees on the parcel found generally as open grown singular trees or in small clusters, these being primarily in the southwest side of the area. These tree species include sugar pine (*P. lambertiana*), incense cedar (*Calocedrus decurrens*), interior live oak (*Quercus wislizeni*), Douglas fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*) and ponderosa pine (*P. ponderosa*).

The growth patterns of the shrubs and stature of the trees evidence a recent fire through the area. This is further evidenced by a few scattered burned out snags.

4.4.1.2 Wildlife

The Project area was visited on December 4 and 10, 2018 and June 5, July 15 and September 17, 2019 by WRM. Species observed within the Project site during the reconnaissance surveys were deer (tracks and pellet groups), ground squirrels, ravens, crows, scrub jays, rufous sided towhee (visual sightings) and gophers (mounds) were the extent of the wildlife species evidenced.

4.4.1.3 Waters of the U.S.

Visual reconnaissance of the site was completed by WRM. No lakes, rivers, creeks or wetlands were identified during the site visits. An aerial reconnaissance of the site was completed using Google Earth historical imagery from 1993 to 2017 (Google Earth 2017). No lakes, rivers, creeks or wetlands were identified in the historical imagery.

4.4.2 Evaluation of Potentially Occurring Special-Status Species

A Botany Survey was completed by WRM on July 18, 2019, provided as *Appendix B*. A sensitive plant list was developed from a search of the California Natural Diversity Data Base for the area to be surveyed. Those listed species for the area are provided in *Table 4.4-1*.

Table 4.4-1. Special-Status Plants Species

Common Name	Scientific name	Ranking
Pallid birds-beak	<i>Cordylanthus tenuis pallescens</i>	1B.2
Trinity buckwheat	<i>Eriogonum alpinum</i>	1B.2
Jepson's dodder	<i>Cuscuta jepsonii</i>	1B.2
Woolly balsamroot	<i>Balsamorhiza lanata</i>	1B.1
Thread-leaved beardtongue	<i>Penstemon filiformis</i>	1B.3
Gasquet rose	<i>Rosa gymnocarpa</i>	1B.3
Shasta chaenactis	<i>Chaenactis suffrutescens</i>	1B.3
Baker's globe mallow	<i>Iliamna bakeri</i>	4.4

Status Code

Rare Plant Rank

- 1B Rare, threatened, or endangered in California and elsewhere
- 2B Rare, threatened, or endangered in California but more common elsewhere
- 3 Plants for which more information is needed
- 4 Plants of limited distribution-Watch list

Rare Plant Threat Rank

- 0.1 Seriously threatened in California
- 0.2 Moderately threatened in California

In January 2019, WRM completed a biological review report for the site. As a part of the biological review, WRM conducted a search of the California Natural Diversity Data Base to determine which listed species could possibly be present on the site and then analyzed that possibly given the habitat conditions. These species are shown in *Table 4.4-2*.

Table 4.4-2. Special-Status Wildlife Species

Common Name Scientific Name	Status	General Habitat Description	Potential to Occur in Project Area
Wildlife			
Golden Eagle <i>Aquila chrysaetos</i>	SFP, SWL	Favor partially or completely open country, especially around mountains, hills and cliffs.	The project area may contain suitable hunting habitat for the golden eagle.
Bald eagle <i>Haliaeetus leucocephalus</i>	FD, SFP, SE	Coasts, rivers, large lakes; in migration, also mountains, open country. Typically close to water, also locally in open dry country.	The project area is unlikely to have suitable hunting habitat for the bald eagle.

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Common Name Scientific Name	Status	General Habitat Description	Potential to Occur in Project Area
Osprey <i>Pandion haliaetus</i>	SWL	Rivers, lakes, coast. Found near water, either fresh or salt, where large numbers of fish are present. May be most common around major coastal estuaries and salt marshes, but also regular around large lakes, reservoirs, rivers.	The lack of a permanent water source within the project area makes it unlikely that an osprey would be found.
Black Swift <i>Cypseloides niger</i>	SSC	Nests on cliffs and behind waterfalls. Feeds over forests and open areas.	There is no suitable habitat for this species within the project area.
Bank swallow <i>Riparia riparia</i>	ST	Bank Swallows live in low areas along rivers, streams, ocean coasts, or reservoirs. Their territories usually include vertical cliffs or banks where they nest in colonies of 10 to 2,000 nests.	There is no suitable habitat for the bank swallow within the project area.
Willow flycatcher <i>Empidonax trillii</i>	SE	Occupy areas with willows or other shrubs near standing or running water.	There is no suitable habitat for the willow flycatcher within the project area.
Prairie falcon <i>Falco mexicanus</i>	SWL	They occur in wide-open habitats of the West, including sagebrush, desert, prairie, agricultural fields, and alpine meadows up to 3500m elevation. They nest on ledges on sheer rocky cliffs.	There is no suitable nesting habitat within the project area. There may be suitable hunting habitat within the project area.
American peregrine falcon <i>Falco peregrinus anatum</i>	FD, SD, SFP	Typically perch or nest on skyscrapers, water towers, cliffs, power poles and other tall structures.	There is no suitable habitat within the project area.
Yellow-breasted chat <i>Icteria virens</i>	SSC	Yellow-breasted Chats live in thickets and other dense, regrowing areas such as bramble bushes, clear cuts, powerline corridors, and shrubs along streams.	Due to the abundance of shrubs, there may be suitable habitat for this species. However, due to the lack of a permanent water source and the project area's proximity to both Interstate-5 and Black Butte transfer station, finding this species is unlikely.
Sierra Nevada red fox <i>Vulpes vulpes necator</i>	FC, ST	Red fir and lodgepole pine forests in the subalpine zone and alpine fell-fields of the Sierra Nevada. Open areas are used for hunting, forested habitats for cover and reproduction.	The Sierra Nevada red fox is unlikely to be found within the project area.
California Wolverine <i>Gulo gulo</i>	FP, ST, SFP	Rugged, remote country, spending most of their time in high elevations near or above timberline.	There is no suitable habitat for this species within the project area.
Fisher- West Coast DPS <i>Pekania pennanti</i>	ST, SSC	Spend most of their time on the forest floor and prefer continuous coniferous forest to other habitats.	With the lack of canopy cover, the project area does not have suitable habitat for the west coast fisher.
Western mastiff bat <i>Eumops perotis californicus</i>	SSC	Most frequently encountered in broad open areas. Generally found in a variety of habitats, from dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, montane meadows, and agricultural areas. Primarily a cliff-dwelling species.	The lack of rock outcroppings and cliffs make it unlikely that this species would be found within the project area.

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Common Name Scientific Name	Status	General Habitat Description	Potential to Occur in Project Area
Pallid bat <i>Antrozous pallidus</i>	SSC	They roost in a variety of places but favor rocky outcrops.	See Potential to Occur for Western mastiff bat.
Spotted bat <i>Euderma maculatum</i>	SSC	Spotted Bats roost in the small cracks found in cliffs and stony outcrops.	See Potential to Occur for Western mastiff bat.

Status Code

FE	Federally Listed- Endangered
FT	Federally Listed- Threatened
FC	Federal Candidate Species
FP	Federal Proposed Species
FD	Federally Delisted
SFP	State Fully Protected
SE	State Listed- Endangered
ST	State Listed- Threatened
SC	State Candidate Species
SSC	State Species of Special Concern
SWL	State Watch List
SD	State Delisted

4.4.3 Biological Resources (IV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

According to the biological surveys completed by WRM, there are no special-status plant or wildlife species on the Project site (WRM 2019a, b). There is no suitable habitat for candidate, sensitive, or special status species within the Project site. As such, impacts to special status species would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No creeks, stream or rivers exist on the Project site. No riparian habitats or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the California Department of

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service have been identified on the Project site. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No federally protected wetlands have been mapped within the Project site. Thus, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project is bordered by I-5 to the west. The CDFW provides an online interactive database called BIOS. This program, among other things, includes a mapping layer which shows critical winter and summer ranges, fall holding areas, and fawning grounds for deer. According to the CDFW Biogeographic Information and Observation System (CDFW 2019) mapping, the Project site is not located in an area of deer critical winter or summer ranges or fall holding areas and fawning grounds (CDFW 2019). The Project contains no waterways and thus would not impact the migration of fish. The WRM wildlife survey did not identify any migrating bird habitat. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There are no local policies or ordinances protecting biological resources pertaining to the Project site. As such no local policies or ordinances for tree protection would apply. There would be no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There are currently no adopted or proposed habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans that affect the Proposed Project. The Project would have no impact in this area.

4.4.4 Mitigation Measures

No significant impacts were identified; no mitigation measures are required.

4.5 Cultural Resources

4.5.1 Cultural Resources Inventory Report

A Cultural Resources Inventory Report was prepared by Genesis Society (2018) for the Proposed Project to determine if cultural resources were present in or adjacent to the Project area and assess the sensitivity of the Project area for undiscovered or buried cultural resources. The analysis of cultural resources was based on a records and literature search conducted at the Northeast Information Center (NEIC) at California State University, Chico (CSU-Chico) on December 6, 2018, a literature review, and a field survey on December 19, 2018. The literature search included the results of previous surveys within one mile of the Proposed Project location.

As a part of the Cultural Survey, Genesis Society contacted the California Native American Heritage Commission (NAHC) on December 13, 2018, to request a search of the Sacred Lands File for the Area of Potential Effect (APE). This search can determine whether or not Sacred Lands have been recorded by California Native American tribes within the APE, because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. The search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the Project area (Genesis Society 2018).

AB 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. Siskiyou County sent notice to Karuk Tribe, Winnemem Wintu Tribe, Torres Martinez Band of Desert Cahuilla Indians about the Project in October 2018. The County did not receive any consultation

request from the Shasta Tribe. None of the tribes requesting consultation provided comments on the Proposed Project.

4.5.2 Confidentiality Restrictions

Sections 6253, 6254, and 6254.10 of the California Code authorize state agencies to exclude archaeological site information from public disclosure under the Public Records Act. In addition, the California Public Records Act (Government Code § 6250 et seq.) and California's open meeting laws (The Brown Act, Government Code § 54950 et seq.) protect the confidentiality of Native American cultural place information. Under Exemption 3 of the federal Freedom of Information Act (5 U.S. Code 5 [USC]), because the disclosure of cultural resources location information is prohibited by the Archaeological Resources Protection Act of 1979 (16 USC 470hh) and Section 304 of the National Historic Preservation Act, it is also exempted from disclosure under the Freedom of Information Act. Likewise, the Information Centers of the California Historical Resources Information System maintained by the California Office of Historic Preservation prohibit public dissemination of records search information. In compliance with these requirements, the results of this cultural resource investigation were prepared as a confidential document, which is not intended for public distribution in either paper or electronic format. As such, the Cultural Resources Inventory Report is not included as an appendix in this Initial Study. While information describing the various Cultural Resources time periods is included in the Initial Study discussion, all references to location of artifacts have been removed for confidentiality and protection of these resources.

4.5.3 Area of Potential Effects

The APE consists of the horizontal and vertical limits of the Project and includes the area within which significant impacts or adverse effects to Historical Resources or Historic Properties could occur as a result of the Project³. The APE is defined for projects subject to regulations implementing Section 106 (federal law and regulations). For projects subject to CEQA, the term Project Area is used rather than APE. For the purpose of this document, the terms Project Area and APE are interchangeable.

The horizontal APE consists of all areas where activities associated with the Project are proposed and, in the case of the current Project, equals the Project Area subject to environmental review under the National Environmental Policy Act and CEQA. This includes areas proposed for construction, vegetation removal, grading, trenching, stockpiling, staging, paving, and other elements described in the official Project description. The horizontal APE also represents the survey coverage area, which measures ±64 acres in size. The vertical APE is described as the maximum depth below the surface to which excavations for Project foundations and facilities will extend. Therefore, the vertical APE includes all subsurface areas where archaeological deposits could be affected. The subsurface vertical APE varies across the Project Area. Subsurface excavation will be necessary for the building foundations and to install utilities.

³ In this case, the APE consists of the 35-acre parcel.

The vertical APE also is described as the maximum height of structures that could impact the physical integrity and integrity of setting of cultural resources, including districts and traditional cultural properties. For the current Project, the above-surface vertical APE is up to 50 feet above the surface.

4.5.4 Records Search

Prior to conducting the intensive-level field survey, a search of archaeological records maintained by the NEIC at CSU-Chico was conducted (IC File # W18-201 dated December 6, 2018). The records search documented the following existing conditions for the 35-acre subject property, as well as a one-mile search radius beyond the APE.

4.5.4.1 Previous Archaeological Survey

According to NEIC records, none of the APE has been subjected to previous archaeological investigation. Three investigations have been documented within the one-mile search radius, including:

Table 4.5-1. Documented Investigations within One-Mile Search Radius

NEIC #	Date	Author(s)
827	1987	Minor, Underwood, Apple, Beckham, Woods
7186	2006	Wooten
12349	2013	Meyer

4.5.4.2 Recorded Cultural Resources

According to the NEIC files, no resources, either prehistoric or historic-era, have been documented within the APE, nor within the one mile search radius.

4.5.4.3 Other Sources Consulted

In addition to the archaeological records of Siskiyou County as maintained by the NEIC, the following sources were also consulted:

- The National Register of Historic Places (NRHP, 2008 and updates).
- The California Register of Historic Resources (CRHR, 2008 and updates).
- The California Inventory of Historical Resources (1976).
- California State Historical Landmarks (1996).
- California Points of Historical Interest (1992).
- The Historic Property Data File (4-5-2012).
- The Determination of Eligibility (4-5-2012).
- General Land Office (GLO) 1877, T40N, R4E.
- GLO 1879, T40N, R4E.
- GLO 1882, T40N, R4E.

- GLO 1883, T40N, R4E.
- 1990 U.S. Geological Survey (USGS) City of Mount Shasta, CA 7.5-minute quadrangle.
- Published and unpublished documents relevant to environment, ethnography, prehistory and early historic developments in the vicinity, providing context for assessing site types and distribution patterns for the Project area (summarized under *Section 4.5.2 Environmental Setting*).

4.5.4.4 Field Survey

All of the circa 35-acre APE was subjected to intensive pedestrian survey by means of walking systematic transects spaced at 20-meter intervals. In searching for cultural resources, the surveyors considered the results of background research and were alert for any unusual contours, soil changes, distinctive vegetation patterns, exotic materials, artifacts, feature or feature remnants and other possible markers of cultural sites.

Portions of the APE have been subjected to past disturbance associated with past road construction, tree and brush removal, rock/soil material quarrying, and contemporary equipment storage. Spring Hill Road, a graded and paved road, generally trends south-north, bisecting the present APE. This activity, and associated buried utilities located within the road's right-of-way, have impacted surface and subsurface soils within and immediately adjacent to the present APE. The central portion of the APE appears to have been subjected to past mineral extraction, likely in the form of rock/soil quarrying, which included substantial excavation, and thus deeply impacted soils within the APE. Evidence of limited tree and brush removal was observed throughout the property, while additional grading, primarily from adjacent parcels, was observed within portions of the APE. Finally, widely scattered contemporary trash items were observed at various locations within the APE (Genesis Society 2018).

No cultural resources were identified as a result of the field survey.

4.5.5 Environmental Setting

The Project area is located on the southwest flank of Mount Shasta, and the south flank of Black Butte, at an elevation of approximately 3,960 feet. The land area is geologically diverse, being at the junction of two mountain ranges: the Cascade Range to the east, and the Siskiyou Mountains to the west. Storm water in the region generally drains south-southwest, ultimately flowing into the Sacramento River. The region's climate is characterized as Mediterranean, with cool, wet winters and hot, dry summers. Contemporary climate has fostered a montane vegetation community which encourages diverse flora and fauna species.

The APE is dominated by a Sierra mixed conifer forest, composed of pine, juniper, sage, and other brush species, as well as grasses (Genesis Society 2018). Mammals common to the area include deer, bear, puma, coyote, badger, rodents and rabbits, while a rich avifauna includes osprey, bald eagle, hawk, owl, woodpecker and quail. The Sacramento River, itself, is home to a number of aquatic species, most importantly, trout and salmon.

Paleoclimatic data indicates that fluctuation in the area's climate occurred during the Holocene. A model of post-Pleistocene climatic fluctuations (Genesis Society 2018) postulates three primary climatic periods:

the Anathermal (ca. 7,000-9,000 BP⁴), with climatic conditions wetter and cooler than the present; the Altithermal (ca. 3,000-7,000 BP), with climatic conditions drier and warmer than the present; and the Medithermal (ca. 3,000 BP), with climatic conditions emerging to the present condition. During the wetter and cooler conditions of the Anathermal, vegetative life zones may have been distributed at lower elevations than at present, a condition that would have affected the distribution of dependent faunal species as well. Conditions more beneficial to avifauna and fish may also have existed during such a period, while the opposite may be true of the Altithermal.

4.5.5.1 Prehistory

Several investigations within this portion of the state have resulted in the development of a number of classification schemes that attempt to place specific cultural material assemblages within limited temporal and spatial contexts. Much of the present understanding of cultural chronologies, prehistoric settlement patterns and subsistence practices relies on research gleaned from the northern Sacramento Valley and the Sacramento River canyon, south of the City of Mount Shasta.

Correlating dating obtained from projectile point types, obsidian hydration, radiocarbon assays and dendrochronology, Basgall and Hildebrandt proposed a triumvirate cultural chronology and subsistence/settlement pattern for prehistoric populations within the Sacramento River Canyon region (Genesis Society 2018).

The Pollard Flat Phase (2,700-5,300 before present [BP]) represents the earliest of these three phases, and is characterized by Squaw Creek Contracting-Stem, Pollard Diamond-shaped and McKee series projectile points, shaped groundstone tools, battered stones, anvils, mauls and net weights.

Settlement and subsistence patterns for this phase indicate that the Pollard Flat Phases is representative of a forager population that occupied residential base camps for extended periods of time.

Following Pollard is the Vollmers Phase (1,700-4,500 BP) which is characterized by medium-sized Clikapudi corner-notch and side-notch projectile points, groundstone tools, battered stones, anvils, mauls and net weights. Vollmers populations were relatively mobile while still maintaining residential camps that were occupied for a shorter time than the Pollard Flat residential camps.

The Mosquito Creek Phase (1,900 BP to contact) is characterized by Gunther series projectile points, and the appearance of Desert Side-notched points later in the phase. Additionally, artifactual assemblage associated with this phase is dominated by expedient, indeterminate groundstone fragments, and further characterized by an absence of shaped tools such as handstones, millingstones, hammerstones, anvils, mauls and net weights. Mosquito Creek populations were comprised of small groups that employed a pattern of seasonal transhumance.

The Pollard Flat and Vollmers Phases are attributed to two distinct populations that coexisted for over 1000 years in the Sacramento River Canyon, with the Pollard Flat population eventually being replaced by

⁴ Before Present (BP) years is a time scale used mainly in geology and other scientific disciplines to specify when events occurred in the past. Because the "present" time changes, standard practice is to use January 1, 1950 as the commencement date of the age scale, reflecting the origin of practical radiocarbon dating in the 1950s.

the Vollmers population. The researchers further argue that there may have been a strong ethnic continuity between the Vollmers and Mosquito Creek peoples but stop short of attributing ethnolinguistic affiliations to any of the groups (Genesis Society 2018).

One of the earliest clearly dated contexts for human occupation in northern California is from a site located north of Redding on Squaw Creek, where a charcoal-based carbon 14 date suggests initial Native American presence within this area around 6,500 years ago. Continuous use of the region is indicated on the basis of evidence from this and other regional sites. Most of the artifactual material dating to this time period suggests cultural affiliation with the Borax Lake area – the presence of large wide-stemmed projectile points and manos and metates being the most prominent and distinctive artifact types represented. The possibility exists that this early culture represents Hokan-speaking peoples who were also ancestral to those who subsequently expanded into the southern Cascade, the southern Klamath, the North Coast Range, and the lower reaches of the northern Sierra Nevada.

Sometime around Anno Domini (A.D.) 200-400, the first major disruption of this possibly Hokan-speaking population by Penutian immigrants is believed to have occurred. Arriving ultimately from southern Oregon and the Columbia and Modoc Plateau region and proceeding down the major drainage systems (including the Sacramento, Feather, Yuba and American rivers), these Penutian-speaking arrivals eventually displaced Hokan populations as far west as the Sacramento Valley floor and the margins of the Sacramento River. At the time of contact with Euro-American populations (ca. 1850), these Penutian-speaking peoples were still expanding into areas previously occupied by the earlier-arriving Hokan-speaking peoples. Presumably introduced by the Penutians were more extensive use of bulbs and other plant foods, animal and fishing products more intensively processed with mortars and pestles, and perhaps the bow and arrow and associated small stemmed- and corner-notched projectile points. In the Redding area, the so-called Shasta (archaeological) Complex represents the material culture record of the local Penutian speakers.

In the present Project area, the descendants of the earlier Hokan-speaking populations—the Shasta Indians—were still in control of Shasta Valley and the area around Weed and the City of Mount Shasta at the time of initial contact with White populations (ca. 1850).

4.5.5.2 Local History

The first Euro-American arrivals into the area include Jedediah Strong Smith and Peter Skene Ogden who explored the region in 1826-27. In 1829, a party of Hudson Bay Company trappers and explorers, led by Alexander Roderick McLeod passed through the region.

The discovery of gold at Sutter's Mill in Coloma in 1848 sparked a massive influx of Euro-Americans into California. The placer lodes of regional streams, particularly around Yreka and within Scott, Jones and Quartz valleys, were vigorously mined during the latter half of the nineteenth century. The initial influx into Shasta Valley and Yreka occurred in 1851, and the name "Thompsons Dry Diggings," and then Shasta Butte City, was used to reference the early mining camp in this area. The town of Weed, located north of the present Project area, was first settled in the 1860's by Abner Weed who started the first major commercial sawmill operation in the county.

During this period, a system of roadways was constructed between Yreka and other areas in northern California and southern Oregon. One component of that system was North Old State Road, which connected Yreka with Mt. Shasta and areas along the Pit River. Shortly after construction of the North Old Stage Road and related components, railroads were extended into the area. One of these was the California and Oregon Railroad (Central Pacific, subsequently the Southern Pacific and now the Union Pacific) which proceeds approximately one to two miles both west and south of the project APE, while a second was the McCloud River Railroad.

The California & Oregon Railroad reached the town of Sisson (Mt. Shasta City) in November of 1886 (Genesis Society 2018). Numerous sawmills sprang up along the new railroad line, and railroad spurs were added to provide access from these mills to the main line. One of these early sawmills was owned by the Pioneer Box Company and located several miles south of the present APE.

As transportation through the region was clearly vital, it was no surprise that by the end of 1963, I-5 was completed through Siskiyou County, trending north-south immediately west of the present APE.

4.5.6 Cultural Resources (V) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Cultural Resources Inventory concluded that no historic properties will be affected by the Proposed Project. However, there always remains the potential for ground-disturbing activities to expose previously unrecorded historic resources. As such, mitigation measure **CUL-1** is required to reduce potential historic resource impacts to the less than significant level.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No prehistoric/archaeological resources were identified within the APE. The absence of such resources within the APE may best be explained by the degree of intensive disturbance which portions of the APE have been subjected to, and to more suitable habitation settings closer to permanent water sources, such as Wagon Creek and the Sacramento River, both of which are located a relatively short distance west and south of the present APE.

While no known archaeological resources were found during the Cultural Resources Inventory Report analysis, there always remains the potential for ground-disturbing activities to expose previously

unrecorded archaeological resources. As such, mitigation measure **CUL-1** is required to reduce potential historic resource impacts to the less than significant level.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No known burial sites were identified during the field survey. A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the Project area. Although Native American burial sites were not identified in the Project area, there is a possibility that unanticipated human remains will be encountered during ground-disturbing project-related activities. Therefore, impacts to unknown human remains would be less than significant with incorporation of mitigation measure **CUL-1**.

4.5.7 Mitigation Measures

CUL-1: If subsurface deposits believed to be cultural or human in origin are discovered during grading and construction activities, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the lead agency and applicable landowner. The agency shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be eligible for inclusion in the National Register of Historic Places (NRHP) or California Register of Historic Places (CRHR). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to their satisfaction.
- If the find includes human remains, or remains that are potentially human, the archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Siskiyou County Coroner (as per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner

will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to their satisfaction.

<i>Timing/Implementation:</i>	<i>During construction</i>
<i>Monitoring/Enforcement:</i>	<i>Siskiyou County</i>

4.6 Energy

4.6.1 Environmental Setting

4.6.1.1 Introduction

Energy consumption is analyzed in this Initial Study due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources (i.e., oil, natural gas, coal) and emissions of pollutants during both the construction and long-term operational phases.

4.6.1.2 Electricity/Natural Gas Services

The Pacific Power, a subsidiary of PacifiCorp, provides electrical services to the Project area through state-regulated public utility contracts. The natural gas is not available to the Project or surrounding area through a natural gas line. Any gas heating or cooking would be provided through propane. Propane is available through a number of companies in Siskiyou County. Pacific Power's ability to provide its services concurrently for each project is evaluated during the development review process. The utility company is bound by contract to update its systems to meet any additional demand. PacifiCorp, a regulated utility based in Portland, Oregon, serves 1.9 million customers across 141,000 square miles in six western states. The company comprises two business units that generate and deliver electricity to its customers. Pacific Power serves customers in Oregon, Washington and California. Rocky Mountain Power serves customers in Utah, Wyoming and Idaho.

4.6.1.3 Energy Consumption

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g., of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption in Siskiyou County from 2013 to 2017 is shown in *Table 4.6-1*. As indicated, the demand has slightly increased since 2013.

Table 4.6-1. Non-Residential Electricity Consumption in Siskiyou County 2013-2017

Year	Non-Residential Electricity Consumption (kilowatt hours)
2017	268,359,000
2016	269,252,000
2015	271,487,000
2014	267,713,000
2013	265,747,000

Source: California Energy Consumption Data Management System (ECDMS) 2019

Automotive fuel consumption in Siskiyou County from 2014 to 2018 is shown in *Table 4.6-2*. As shown, on-road and off-road fuel consumption have decreased in the county since 2014.

Table 4.6-2. Automotive Fuel Consumption in Siskiyou County 2014-2018

Year	On-Road Fuel Consumption (gallons)	Off- Road Fuel Consumption (gallons)
2018	71,262,551	1,226,794
2017	72,169,983	1,168,486
2016	72,420,843	1,110,875
2015	72,060,455	1,110,875
2014	71,572,736	1,997,522

Source: CARB 2014

4.6.2 Energy (VI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The impact analysis focuses on the three sources of energy that are relevant to the Proposed Project: electricity, the equipment fuel necessary for Project construction, and the automotive fuel necessary for Project operations. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project. For the purpose of this analysis, the amount of electricity estimated to be consumed by the Project is quantified and compared to that consumed by non-residential land uses (commercial and

industrial) in Siskiyou County. Similarly, the amount of fuel necessary for Project construction and operations is calculated and compared to that consumed in Siskiyou County.

The analysis of electricity gas usage is based on California Emissions Estimator Model (CalEEMod) modeling conducted by ECORP (see *Appendix C*), which quantifies energy use for Project operations. The amount of operational automotive fuel use was estimated using the CARB's EMFAC2014 computer program, which provides projections for typical daily fuel usage in Siskiyou County. The amount of total construction-related fuel use was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1.

Energy consumption associated with the Proposed Project is summarized in *Table 4.6-3*.

Table 4.6-3. Proposed Project Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Electricity Consumption ¹	17,120 kilowatt-hours	0.006%
Automotive Fuel Consumption		
Project Construction ²	34,286 gallons	3.00%
Project Operations ³	2,782 gallons	0.004%

Source: ¹Electricity consumption calculated by ECORP Consulting using CalEEMod 2016.3.2; ²Climate Registry 2016; ³EMFAC2014 (CARB 2014)

Notes: The Project increases in electricity and natural gas consumption are compared with all of the non-residential buildings in Imperial County in 2017, the latest data available. The Project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2007, the most recent full year of data.

As shown in *Table 4.6-3*, the increase in electricity usage as a result of the Project would constitute a negligible increase of 0.006 percent in the typical annual electricity consumption attributable to non-residential uses in Siskiyou County. Further, the Project would adhere to all federal, state, and local requirements for energy efficiency, including the Title 24 standards. Title 24 standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of the Title 24 standards significantly reduces energy usage. Due to the relatively low increase in electricity from the Project and the implementation of energy reducing strategies, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

The Project's gasoline fuel consumption during the construction period is estimated to be 34,286 gallons of fuel, which would increase the annual construction-related gasoline fuel use in the County by three percent during the single year that Project construction takes place. As such, Project construction would have a nominal effect on local and regional energy supplies, especially over the long-term. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and require recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

As indicated in *Table 4.6-3*, Project operation is estimated to consume approximately 2,782 gallons of automotive fuel per year, which would increase the annual countywide automotive fuel consumption by 0.004 percent. The amount of operational fuel use was estimated using the CARB's EMFAC2014 computer program, which provides projections for typical daily fuel usage in Siskiyou County. This analysis conservatively assumes that all of the automobile trips projected to arrive at the Project during operations would be new to Siskiyou County. The Project would not result in any unusual characteristics that would result in excessive long-term operational automotive fuel consumption. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

For these reasons, this impact would be less than significant.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The County of Siskiyou does not have a plan for renewable energy or energy efficiency. As discussed in under Item a) the energy and fuel consumption related to this Project would be minimal. For these reasons, this impact would be less than significant.

4.6.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.7 Geology and Soils

4.7.1 Environmental Setting

4.7.1.1 Geomorphic Setting

The Project site is located in the north-central portion of the Cascade Range geomorphic province of California. The Cascade Range is a chain of volcanic cones, extends through Washington and Oregon into California. It is dominated by Mt. Shasta, a glacier-mantled volcanic cone, rising 14,162 feet above sea level. The southern termination is Lassen Peak, which last erupted in the early 1900s. The Cascade Range is transected by deep canyons of the Pit River. The river flows through the range between these two major volcanic cones, after winding across interior Modoc Plateau on its way to the Sacramento River. (California Geological Survey [CGS] 2002).

4.7.1.2 Site Geology

According to the CGS (1981), the Project site is underlain by the Quaternary Alluvium. The geology is made up of alluvium, lake, playa, and terrace deposits; which are unconsolidated and semi-consolidated.

4.7.1.3 Site Soils

According to the NRCS through the Web Soil Survey database, the Project site is composed of one soil unit, Deetz stony loamy sand with two different slope profiles, as shown in *Table 4.7-1*. The Web Soil Survey also identifies drainage, flooding, erosion, runoff, and the linear extensibility potential for the Project soils. According to this survey, all of the Project soils are somewhat excessively drained, have a low runoff potential, and have no potential for flooding. The majority of Project site soils have a moderate erosion potential and a low linear extensibility (shrink-swell) (NRCS 2018).

Table 4.7-1. Project Area Soil Characteristics

Soil	Percentage of Site	Drainage	Flooding Frequency Class	Erosion Hazard ¹
Deetz gravelly loamy sand, 5 to 15 percent slopes	81.4%	Somewhat excessively drained	None	Moderate
Deetz stony loamy sand, 2 to 15 percent slopes	18.6%	Somewhat excessively drained	None	Slight
	Runoff Potential ²	Linear Extensibility (Rating) ³	Septic Absorption	Frost Action ⁴
Deetz gravelly loamy sand, 5 to 15 percent slopes	A (low)	1.5%, low	Very limited	Low
Deetz stony loamy sand, 2 to 15 percent slopes	A (low)	1.5%, low	Very limited	Low

Source: NRCS 2018

Notes:

- The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and offsite damage are likely, and erosion-control measures are costly and generally impractical.
- Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation.
Group A: Soils having a high infiltration rate (low runoff potential) when thoroughly wet.
Group B: Soils having a moderate infiltration rate when thoroughly wet.
Group C: Soils having a slow infiltration rate when thoroughly wet.
Group D: Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet.
- Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3%, moderate if 3 to 6%, high if 6 to 9%, and very high if more than 9%. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.
- Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

4.7.1.4 Regional Seismicity and Fault Zones

In California, special definitions for active faults were devised to implement the Alquist-Priolo Earthquake Fault Zoning Act of 1972, which regulates development and construction in order to avoid the hazard of surface fault rupture. The State Mining and Geology Board established policies and criteria in accordance with the act. The board defined an active fault as one which has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault was considered to be any fault that

showed evidence of surface displacement during Quaternary time (last 1.6 million years). Because of the large number of potentially active faults in California, the State Geologist adopted additional definitions and criteria in an effort to limit zoning to only those faults with a relatively high potential for surface rupture. Thus, the term sufficiently active was defined as a fault for which there was evidence of Holocene surface displacement. This term was used in conjunction with the term well-defined, which relates to the ability to locate a Holocene fault as a surface or near-surface feature (CGS 2010).

According to the DOC Data Viewer interactive mapping program, the closest earthquake faults to the Project site are two unnamed Quaternary era faults on the slopes of Mt. Shasta and Mt. Shastina. The nearest named fault is the Yellow Butte Fault approximate 15 miles to the northeast of the site. The Yellow Butte Fault is also a Quaternary era fault. The most fault to have the most recently recorded event was the Rainbow Mountain fault which last shook in 1978. This Holocene era fault is approximately 28 miles to the east of the Project site (CGS 2018).

4.7.1.5 Paleontological Resources

A paleontological records search was requested from the University of California Museum of Paleontology (UCMP) on January 2, 2019. The search included a review of the institution's paleontology specimen collection records for Siskiyou County, including the Project area and vicinity. In addition, a query of the UCMP catalog records; a review of regional geologic maps from the CGS; a review of local soils data; and a review of existing literature on paleontological resources of Siskiyou County by ECORP. The purpose of the assessment was to determine the sensitivity of the Project area, whether or not known occurrences of paleontological resources are present within or immediately adjacent to the Project area, and whether or not implementation of the project could result in significant impacts to paleontological resources. Paleontological resources include mineralized (fossilized) or unmineralized bones, teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains.

The results of the search of the UCMP indicated that 96 paleontological specimens were recorded from 15 identified localities and 55 unidentified localities in Siskiyou County. Paleontological resources include fossilized remains of plants, mammals, fish, mollusks, and microfossils. No paleontological resources have been previously recorded within or near the Proposed Project site (UCMP 2019).

4.7.2 Geology and Soils (VII) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with 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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii)	Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii)	Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv)	Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i)	The Proposed Project site is not located within an Alquist-Priolo Earthquake Zone (CGS 2018). There would be no impact related to fault rupture.				
ii)	According to CGS' Earthquake Shaking Potential for California mapping, the Proposed Project site is located in an area which is distant from known, active faults and will experience lower levels of ground shaking less frequently. In most earthquakes, only weaker masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking in the area (CGS 2016). The Proposed Project includes the construction of one building, a septic system, a washout basin, and a parking/equipment storage lot, which may be affected by a seismic event. However, all structures would be required to comply with the 2016 California Building Code (CBC), including the required seismic mitigation standards. Because of the required compliance with the CBC seismic mitigation standards and the distance from active faults, the Proposed Project would have a less than significant impact related to strong ground shaking.				
iii)	<p>Liquefaction occurs when loose sand and silt saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in the following types of seismic-related ground failure:</p> <ul style="list-style-type: none"> • Loss of bearing strength – soils liquefy and lose the ability to support structures • Lateral spreading – soils slide down gentle slopes or toward stream banks • Flow failures – soils move down steep slopes with large displacement 				

- Ground oscillation – surface soils, riding on a buried liquefied layer, are thrown back and forth by shaking
- Flotation – floating of light buried structures to the surface
- Settlement – settling of ground surface as soils reconsolidate
- Subsidence – compaction of soil and sediment

Liquefaction potential has been found to be greatest where the groundwater level and loose sands occur within a depth of about 50 feet or less. DOC provides mapping for area susceptible to liquefaction in California. According to this mapping, the Project is not located in an area of liquefaction (DOC 2018B). As such, the Proposed Project would result in less than significant impacts with regard to seismic-related ground failure, including liquefaction.

- iv) While the Project site is located in an area of moderate elevation gain, the site does not have steep hillsides or other formations susceptible to landslides during a seismic event. As such, the potential for landslides would be less than significant.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As shown in *Table 4.6-1*, the Project soils have a slight to moderate erosion potential. Construction activities during Project site development, such as grading, excavation, and soil hauling, would disturb soils and potentially expose them to wind and water erosion. The Project includes erosion control measure as a part of construction. These include: hydroseeding finished cut/fill banks, straw mulch covering for those non-final cut/fill slopes and graded areas without a gravel cover, track walking cut/fill banks greater than 15 feet high, sediment traps, fiber rolls around erodible stockpiles, and a gravel surface for the contractor's yard, shop and driveways.

The Project applicant will also be required to prepare a SWPPP to comply with the RWQCB General Construction Storm Water Permit. BMPs are included as part of the SWPPP and would be implemented to manage erosion and the loss of topsoil during construction-related activities (see *Section 4.10.2*). Implementation of the Project's erosion control measure and any additional required BMPs would reduce soil erosion impacts to a less than significant impact.

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

As discussed previously, the Project site has little potential for landslides.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other “free” face, such as an excavation boundary. Lateral spreading can result from either the slump of low cohesion and unconsolidated material or, more commonly, by liquefaction of either the soil layer or a subsurface layer underlying soil material on a slope, resulting in gravitationally driven movement. One indicator of potential lateral expansion is frost action. Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing (NRCS 2018). As indicated in *Table 4.6-1*, the Web Soil Survey identifies the Project site as having soils with a low frost action potential. Additionally, as discussed in Item a) iii) above, the Project site is not identified as being in an area with a potential for liquefaction. As such, the potential for impacts due to lateral spreading would be less than significant.

With the withdrawal of fluids, the pore spaces within the soils decrease, leading to a volumetric reduction. If that reduction is significant enough over an appropriately thick sequence of sediments, regional ground subsidence can occur. This typically only occurs within poorly lithified sediments and not within competent rock.⁵ No oil, gas, or high-volume water extraction wells are known to be present in the Project area. According to the USGS, the Project site is not located in an area of land subsidence (USGS 2018). As such, the potential for impacts due to subsidence would be less than significant.

Collapse occurs when water is introduced to poorly cemented soils, resulting in the dissolution of the soil cementation and the volumetric collapse of the soil. In most cases, the soils are cemented with weak clay (argillic) sediments or soluble precipitates. This phenomenon generally occurs in granular sediments situated within arid environments. Collapsible soils will settle without any additional applied pressure when sufficient water becomes available to the soil. Water weakens or destroys bonding material between particles that can severely reduce the bearing capacity of the original soil. The collapse potential of these soils must be determined for consideration in the foundation design.

Because of the required compliance with the CBC seismic mitigation standards and the distance from active faults the potential for that settlement/collapse at the site is considered unlikely. As such, mitigation measure **GEO-1** is required to ensure that the potential for impacts due to collapse would be less than significant.

⁵ The processes by which loose sediment is hardened to rock are collectively called lithification.

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Expansive soils are types of soil that shrink or swell as the moisture content decreases or increases. Structures built on these soils may experience shifting, cracking, and breaking damage as soils shrink and subside or expand. Expansive soils can be determined by a soil's linear extensibility. There is a direct relationship between linear extensibility of a soil and the potential for expansive behavior, with expansive soil generally having a high linear extensibility. Thus, granular soils typically have a low potential to be expansive, whereas clay-rich soils can have a low to high potential to be expansive. The shrink-swell potential is low if the soil has a linear extensibility of less than three percent, moderate if 3 to 6 percent, high if 6 to 9 percent, and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. As shown in *Table 4.6-1*, linear extensibility values for the site are 1.5 percent. Soils with linear extensibility in that range correlate to soils having a low expansion potential. Based on this information, the potential for impacts because of expansive soils would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Project would include the development of a septic system to process wastewater from the Project. As shown in *Table 4.7-1*, according to the NRCS, the site soils have a very limited ability for septic absorption. However, the Siskiyou County Community Development Environmental Health Division oversees the installation and approval of septic systems in the County. The Project's septic system would be designed to provide adequate wastewater disposal including the consideration of site soils. The Environmental Health Division will only approve of a system that can be designed to treat the Project's wastewater adequately. As such, the Project would have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No known paleontological resources sites were identified during the field survey of the Project site. A search of the UCMP failed to indicate the presence of paleontological resources in the Project area. Although paleontological resources sites were not identified in the Project area, there is a possibility that unanticipated paleontological resources will be encountered during ground-disturbing project-related activities. Therefore, impacts to unknown paleontological resources would be less than significant with incorporation of mitigation measure **GEO-1**.

4.7.3 Mitigation Measures

GEO-1 If paleontological or other geologically sensitive resources are identified during any phase of Project development, the construction manager shall cease operation at the site of the discovery and immediately notify Siskiyou County. Siskiyou County shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the consulting paleontologist, Siskiyou County shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the Project site while mitigation for paleontological resources is carried out.

Timing/Implementation: During construction

Monitoring/Enforcement: Siskiyou County

4.8 Greenhouse Gas Emissions

4.8.1 Environmental Setting

Greenhouse gases (GHGs) are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH₄ traps more than 25 times more heat per molecule than CO₂, and N₂O absorbs 298 times more heat per molecule than CO₂. Often, estimates of GHG emissions are presented in CO₂e. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

4.8.2 Greenhouse Gas Emissions (VIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.8.2.1 Construction Impacts

Construction-related activities that would generate GHGs include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). Significance thresholds for GHG emissions resulting from land use development projects have not been established in Siskiyou County. In the absence of any GHG emission significance thresholds, the projected emissions are compared to the SCAQMD-recommended threshold of 3,000 metric tons of CO₂e annually. While significance thresholds used in Southern California are not binding in Siskiyou County, they are instructive for comparison purposes.

Construction-generated GHG emissions associated the Proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. Predicted maximum annual construction-generated emissions for the Proposed Project are summarized in *Table 4.8-1*.

Table 4.8-1. Construction-Related Greenhouse Gas Emissions

Construction Year	Carbon Dioxide Equivalents (CO ₂ e) (metric tons)
Construction	
Year 2020	348
SCAQMD Significance Threshold	3,000
Exceed Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to *Appendix C* for Model Data Outputs.

Note: Building construction, paving, and architectural coating assumed to occur simultaneously.

As shown in *Table 4.8-1*, GHG emissions would remain below the significance threshold during Project construction. Construction-generated GHG emissions would be less than significant.

4.8.2.2 Operational Impacts

Operation of the Project would result in GHG emissions predominantly associated with motor vehicle use. As explained above, the SCAQMD threshold will be used for comparison purposes. *Table 4.8-2* summarizes all the direct and indirect annual GHG emissions levels associated with operations of the Project.

Table 4.8-2. Operational-Related Greenhouse Gas Emissions

Emissions Source	CO ₂ e (metric tons)
Area Source (landscaping, hearth)	0
Energy	14
Mobile	41
Waste	3
Water	5
Total:	63
<i>Significance Threshold</i>	<i>3,000</i>
Exceed Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to Appendix C for Model Data Outputs.

As shown in Table 4.8-2, GHG emissions would remain below the significance threshold during Project operations. Operational-generated GHG emissions would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project would not conflict with any adopted plans, policies, or regulations adopted for the purpose of reducing GHG emissions. As identified under response 4.8.2 (a), Project-generated GHG emissions would not surpass GHG significance thresholds, which were prepared with the purpose of complying with California GHG reduction goals. Therefore, the Proposed Project would not conflict with California GHG reduction goals. No impact would occur.

4.8.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.9 Hazards and Hazardous Materials

4.9.1 Environmental Setting

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 by the California Health and Safety Code, § 25501 as follows:

"Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any

material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

A hazardous material is defined in Title 22, Section 662601.10, of the CCR as follows:

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.

The release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Most hazardous materials regulation and enforcement in Siskiyou County is managed by the Siskiyou County Environmental Health Division. The Division is responsible for responding to incidents involving any release or threatened release of hazardous materials. Threats to people, property and the environment are assessed, and then remedial action procedures are conducted under the supervision of a Registered Environmental Health Specialist. The Division is also responsible for the requiring all business that use hazardous materials to comply with the State required hazardous materials business plan submittal and registration with the California Environmental Reporting System.

Under Government Code § 65962.5, both the California Department of Toxic Substance Control (DTSC) and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC (2018) and SWRCB (2018) lists identified no open cases of hazardous waste violations within one mile of the Project site.

4.9.2 Hazards and Hazardous Materials (IX) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project would result in the storage of antifreeze, oil and lubricants for vehicle maintenance and diesel fuel. Typical incidents that could result in accidental release of hazardous materials involve leaking storage tanks, spills during transport, inappropriate storage, inappropriate use, and/or natural disasters. If not remediated immediately and completely, these and other types of incidents could cause toxic fumes and contamination of soil, surface water, and groundwater. Depending on the nature and extent of the contamination, groundwater supplies could become unsuitable for use as a domestic water

source. Human exposure to contaminated soil or water could have potential health effects depending on a variety of factors, including the nature of the contaminant and the degree of exposure.

Hazardous materials must be stored in designated areas designed to prevent accidental release to the environment. CBC requirements prescribe safe accommodations for materials that present a moderate explosion hazard, high fire or physical hazard, or health hazards.

Hazardous materials regulations, which are codified in Titles 8, 22, and 26 of the CCR, and their enabling legislation set forth in Chapter 6.95 of the California Health and Safety Code, were established at the state level to ensure compliance with federal regulations and to reduce the risk to human health and the environment from the routine use of hazardous substances. Protection against accidental spills and releases provided by this legislation includes physical and mechanical controls of fueling operations, including automatic shutoff valves; requirements that fueling operations are contained on impervious surface areas; oil/water separators or physical barriers in catch basins or storm drains; vapor emissions controls; leak detection systems; and regular testing and inspection of fueling stations.

Aboveground tanks storing hazardous chemicals must have secondary containment to collect fluids that are accidentally released. Applicable existing standards include the California Environmental Protection Agency's Aboveground Petroleum Storage Act, Cal/OSHA operational requirements, California Health and Safety Code Section 25270 regarding aboveground storage tanks and § 25290 regarding underground storage tanks. Compliance with all applicable federal and state laws related to the storage of hazardous materials would be required to maximize containment and provide for prompt and effective cleanup, if an accidental release occurs.

Businesses that sell and store hazardous materials are subject to the County's reporting program. The program requires the preparation of a Hazardous Material Business Plan that provides an inventory of hazardous materials onsite, emergency plans and procedures in the event of an accidental release, and training for employees on safety procedures for handling hazardous materials and what to do in the event of a release or threatened release. These plans are routine documents that are intended to disclose the presence of hazardous materials and provide information on actions to be taken if materials are inadvertently released.

The Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. These materials would be used, stored, and disposed in accordance with existing regulations and product labeling and would not create a significant hazard to the public or to the environment. Therefore, the Project would have a less than significant impact in this area.

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As discussed in Issue a), the Project would not result in the routine transport, use, disposal, handling, or emission of any hazardous materials that would create a significant hazard to the public or the environment. Potential construction-related hazards could be created during the course of Project construction at the site, given that construction activities involve the use of heavy equipment, which uses small and incidental amounts of oils and fuels and other potentially flammable substances. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials used during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, state, and federal law.

All hazardous materials on the site would be handled in accordance with city and state regulations. Because any hazardous materials used for operations would be in small quantities, long-term impacts associated with handling, storing, and disposing of hazardous materials from project operation would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The nearest public school to the Project site is the Mt. Shasta High School, approximately 2.8 miles southeast of the Project site. None of the proposed new uses would emit any hazardous emissions. The Project would have no impact in this area.

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Under Government Code § 65962.5, both the DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC and SWRCB lists identified no open cases of hazardous waste violations on the Project site. Therefore, the Project site and the Proposed Project are not on a parcel included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 (DTSC 2018; SWRCB 2018). As a result, this would not create a significant hazard to the public or to the environment and would have no impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The nearest airport to the Project site is the Dunsmuir Municipal - Mott Airport, located approximately seven miles south of the site. According to the Airport Layout Plan Update (2008), the Proposed Project is located outside of all compatibility and influence zones (Barnard Dunkelberg & Company 2008). As such, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project does not include any actions that would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. All construction activities would occur onsite and not impede the use of surrounding roadway in an emergency evacuation. The Project involves the development of a washout basin and maintenance yard and would not interfere with any emergency

response or evacuation plans. Implementation of the Proposed Project would result in no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point.

CAL FIRE has designated the Project site as being within an area having a very high wildland fire potential (CAL FIRE 2007).

The Project is reviewed by CAL FIRE and the County Building Department and would be required to be constructed with fire suppression infrastructure and clear space areas as required by CAL FIRE and the CBC. Implementation of these requirements would reduce the potential wildfire impacts to a less than significant level.

4.9.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.10 Hydrology and Water Quality

4.10.1 Environmental Setting

Regional Hydrology

Surface Water

The Project site is located in the greater Sacramento River hydrologic region. The Sacramento River hydrologic region covers ±17.4 million acres (27,200 square miles). The region includes all or large portions of Modoc, Siskiyou, Lassen, Shasta, Tehama, Glenn, Plumas, Butte, Colusa, Sutter, Yuba, Sierra, Nevada, Siskiyou, Sacramento, El Dorado, Yolo, Solano, Lake, and Napa counties. Small areas of Alpine and Amador counties are also within the region. Geographically, the region extends south from the Modoc Plateau and Cascade Range at the Oregon border, to the Sacramento-San Joaquin Delta (California Department of Water Resources [DWR] 2003).

The Project site is located within boundaries of the Upper Sacramento River watershed. The Upper Sacramento River originates from water flowing off Mount Shasta to the north and from the Klamath

Mountains to the west. The river flows south for approximately 40 miles, joined by numerous tributary streams, and empties into Lake Shasta above Shasta Dam. Near the city of Mount Shasta in Siskiyou County, flows are regulated by the 430-acre Lake Siskiyou Reservoir built in 1968 for power production and recreation. Wilderness, high mountains, and numerous lakes and streams, together with an abundance of public land, make this watershed a center for outdoor recreation. The watershed also supports extensive timber resources on both public and private lands, and the river itself is one of the state's premier wild trout waters. Prominent features in the watershed include Mount Shasta, Union Pacific Railroad, Lake Shasta and Shasta Dam, and Castle Crags State Park. (Sacramento River Watershed Program [SRWP] 2018).

Surface flow in the river has been monitored by USGS at a location near Lake Shasta since 1945. Average daily flow is approximately 1,000 cubic feet per second (cfs), with a peak daily flow of 70,000 cfs (1974) and extreme low of 117 cfs (1977). Located in the upper watershed near the City of Mount Shasta, the 26,100-acre-foot Box Canyon Dam/Siskiyou Reservoir is operated by Siskiyou County for hydropower generation and recreation. Local communities capture spring water for domestic supply. There are no defined groundwater basins in this watershed; however, individual domestic wells are located throughout the region, and larger wells supply water to bottling plants in Mount Shasta and Dunsmuir. (SRWP 2018).

Groundwater

Groundwater in the State of California is managed and monitored by the DWR. While the Project site is within the Sacramento River hydrologic region, it is not located in a groundwater basin as identified by the DWR. No groundwater information is available for the Project site. The nearest monitoring well to the Project site is located approximately 10 miles to the northwest on Edgewood Road (DWR 2018)

4.10.1.1 Project Site Hydrology and Onsite Drainage

The Project site is located on relatively hilly terrain situated at an elevational range between 3,850- 3,960 feet AMSL. There are no lakes, rivers, streams or other water bodies on the Project site.

In the Project area, the precipitation period of the year lasts for nine months, from September to late June with about five to six months of this in snow. The most rain/snow falls during the 31 days around December 10, with an average total accumulation of 4.5 inches. The rainless period of the year lasts for about two months, from June 24 to September 12. The least rain falls around July 31, with an average total accumulation of 0.1 inch. (Weatherspark 2018).

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the Project area (Map No. 06093C3025D) shows that the Project site is in unshaded Zone X, meaning that the area is outside of the 0.2 percent annual chance (500-year) floodplain [FEMA 2011].

4.10.2 Hydrology and Water Quality (X) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

In accordance with National Pollutant Discharge Elimination System (NPDES) regulations, the State of California requires that any construction activity affecting one acre or more obtain a General Construction Activity Stormwater Permit (General Permit) to minimize the potential effects of construction runoff on receiving water quality. Performance standards for obtaining and complying with the General Permit are described in NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ.

General Permit applicants are required to submit to the appropriate regional board Permit Registration Documents for the Project, which include a Notice of Intent (NOI), risk assessment, site map, signed certification statement, an annual fee, and a SWPPP. The SWPPP includes pollution prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, and a detailed construction timeline. The SWPPP must also include implementation of BMPs to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges.

Examples of typical construction BMPs included in SWPPPs include, but are not limited to, using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters. SWPPP BMPs are recognized as effective methods to prevent or minimize the potential releases of pollutants into drainages, surface water, or groundwater.

The Project includes erosion control measure as a part of construction. These include: hydroseeding finished cut/fill banks, straw mulch covering for those non-final cut/fill slopes and graded areas without a gravel cover, track walking cut/fill banks greater than 15 feet high, sediment traps, fiber rolls around erodible stockpiles, and a gravel surface for the contractor's yard, shop and driveways. Strict SWPPP compliance, coupled with the use of appropriate BMPs, would reduce potential water quality impacts during construction activities.

All Project wastewater would be collected and treated by a proposed onsite septic system. The Siskiyou County Community Development Environmental Health Division oversees the installation and approval of

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

septic systems in the County. The Project's septic system would be designed to provide adequate wastewater disposal including the consideration of site soils. The Environmental Health Division will only approve of a system that can be designed to treat the Project's wastewater adequately. As such, the Project would have a less than significant impact in this area

Implementation of BMPs required as part of the SWPPP approval of the septic system by the Environmental Health Division would ensure that the Proposed Project would not create or contribute to any violations of water quality standards or waste discharge requirements. There would be a less than significant impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Water to the site would be provided through a groundwater well which would be installed as a part of the Project. As discussed previously, the Project site is not located in an identified groundwater basin. Therefore, the size and amount of storage capacity of groundwater in the area has not been determined.

The only impervious surface on the Project site would be the proposed 4,000-square-foot shop/office building. Any stormwater coming from the building would flow onto the surrounding ground surface and be absorbed into the natural drainage of the site. As such, the Project would have a less than significant impact to groundwater recharge.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
provide substantial additional sources of polluted runoff; or				
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

i-iii) Less than significant

No creeks, streams or rivers exist on or nearby the Project site. As such, siltation of on- or offsite waterways would not occur.

The Project construction activities would result in soil disturbances of at least one acre of total land area. As such, an NPDES Construction General Permit would be required prior to the start of construction. Excavation and grading activities associated with the Proposed Project will reduce vegetative cover and expose bare soil surfaces making these surfaces more susceptible to erosion. To comply with the requirements of the NPDES Construction General Permit, the Project will be required to file an NOI with the State of California and submit a SWPPP defining BMPs for construction and post-construction-related control of the Proposed Project site runoff and sediment transport. Requirements for the SWPPP include incorporation of both erosion and sediment control BMPs. SWPPPs generally include the following applicable elements:

- Diversion of offsite runoff away from the construction area
- Prompt revegetation of proposed landscaped areas
- Perimeter straw wattles or silt fences and/or temporary basins to trap sediment before it leaves the site
- Regular sprinkling of exposed soils to control dust during construction during the dry season
- Installation of a minor retention basin(s) to alleviate discharge of increased flows
- Specifications for construction waste handling and disposal
- Erosion control measures maintained throughout the construction period
- Preparation of stabilized construction entrances to avoid trucks from imprinting debris on city roadways
- Contained wash out and vehicle maintenance areas
- Training of subcontractors on general construction area housekeeping
- Construction scheduling to minimize soil disturbance during the wet weather season
- Regular maintenance and storm event monitoring.

Note that the SWPPP is a “live” document and should be kept current by the person responsible for its implementation. Preparation of, and compliance with a required SWPPP would effectively prevent Proposed Project onsite erosion and sediment transport offsite. This will reduce potential runoff, erosion, and siltation associated with construction and operation of the Proposed Project. The effects of the Proposed Project on on- and offsite erosion and siltation, therefore, would be less than significant.

Implementation of the Proposed Project would not result in the substantial increase of the rate or amount of surface runoff in a manner that would result in flooding on- or offsite. The only Project change to the amount of onsite impervious surfaces on the 33.5-acre site would involve the 4,000-square-foot shop/office building and the 900-square-foot washout basin. All parking and contractor’s yard area would be graveled. Any stormwater flowing from the shop/office building would be routed into building drainage facilities and, as with the graveled parking and contractor’s yard, be absorbed into the ground. The washout basin would be designed to prevent stormwater from entering the basin and provide a one-foot freeboard to prevent overflow. As such, the drainage pattern at the Project site, as well as surface runoff conditions after implementation of the Proposed Project, would not result in on- or offsite flooding. Therefore, the Proposed Project would have a less than significant impact on causing flooding on- or offsite.

See discussion of Issues i) and ii), above. No existing or planned stormwater drainage systems occur on or adjacent to the site. The Proposed Project would involve changes to the amount of onsite impervious surfaces potentially increasing the amount of onsite runoff. However, any stormwater flowing from these structures would be routed into Project drainage facilities and would be absorbed into the ground naturally.

Polluted runoff from the Project site during construction and operation could include sediment from soil disturbances, oil and grease from construction equipment, and gross pollutants such as trash and debris. Compliance with NPDES permit requirements would ensure that BMPs would be implemented during the construction phase to effectively minimize excessive soil erosion and sedimentation and eliminate non-stormwater discharge offsite. As required by law, BMPs would be included as part of the Proposed Project to ensure that potentially significant impacts are reduced to less than significant levels. Therefore, impacts associated with stormwater volumes and polluted runoff during the construction of the Proposed Project would be less than significant.

Activities associated with operation of the Proposed Project are not expected to generate substances that can degrade the quality of water runoff. While potential impacts could result from vehicles and other users at the Proposed Project site during operation, all potential impacts to water quality would be reduced by stormwater pollution control measures and wastewater discharge BMPs required at the Project site as a part of Project development and operation. Therefore, impacts during operation would be considered less than significant.

iv) **No impact.**

FEMA flood hazard maps (Map 06093C3025D) shows that the Project site is in unshaded Zone X. The Project site is not located within a flood zone. Therefore, implementation of The Proposed Project will not have an impact related to impeding or redirecting flood flows

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

FEMA flood hazard maps (Map 06093C3025D) shows that the Project site is in unshaded Zone X. The Project site is not located within a flood zone. Therefore, implementation of The Proposed Project will not have an impact related to flooding.

The Project site is not protected by levees from any flood hazard. There are no natural waterways on or near the Project site. No large bodies of water exist near the Proposed Project site. The Project site is not located within a potential tsunami or seiche inundation area. Damage due to a seiche, a seismic-induced wave generated in a restricted body of water would not occur.

Lake Siskiyou is approximately 4.5 miles south of the Project site. However, waters due to a failure of Lake Siskiyou's dam would flow in a southerly direction and would not impact the site. Additionally, dams are regulated by DWR's Division of Safety of Dams and are routinely inspected during their impoundment life, which includes monitoring for compliance with seismic stability standards. Prior to the terrorist attacks of September 11, 2001, public information was available that provided structural ratings for dams throughout the nation. Since that time, this information, as well as, dam inundation areas, have been classified and is not readily available. Thus, dam failure is not considered a reasonably foreseeable event, and the Proposed Project would not affect dam operations. As such, the Proposed Project would have a less than significant impact from dam or levee failure.

Based on the discussion above, the Project would not result in the release of pollutants. There would be no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is located in a sparsely developed area and there are no water quality control plan or sustainable groundwater management plan pertaining to the area. Therefore, the Project would have not impact.

4.10.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.11 Land Use and Planning

4.11.1 Environmental Setting

The Siskiyou County General Plan describes the County's approach to defining the land uses in the County. The County does not use typical land use designations in the General Plan but allows the determination of land use to be defined by the physical environment. The General Plan states that the reasoning for this approach is because:

"This means that future development should occur in areas which will be easiest to develop without entailing great public serve costs and which will not displace or endanger the county's critical natural resources."

As such, there is not a defined General Plan land use designation for the Project site. The General Plan uses a series of maps which assist in the potential uses of a site. These maps include the following:

Map 1: Geologic Hazard,

Map 7: Flood Hazard,

Map 2: Soils: Erosion Hazard,

Map 8: Surface Hydrology,

Map 3 Soils: Building Foundations Limitations,

Map 9: Deer Wintering Areas:

Map 4: Soils: Severe Septic Tank Limitations,

Map 10: Wildfire Hazard,

Map 5: Excessive Slope,

Map 11: Woodland Productivity, and

Map 6: Water Quality

Map 12: Prime Agricultural Soils

The County's zoning map identifies the Project site as being within the AG-2 Non-Prime Agriculture zoning district.

Siskiyou County Code Section 10-6.4901 describes the AG-2 district as an area where general agricultural activities and agriculturally related activities can occur. The use of the site as proposed for the Project site would not be allowed in the AG-2 district. As such, the Project is proposing a rezone to M-M Light Industrial. Section 10-6.4601 describes the M-M District as an area where light manufacturing and the less abrasive industrial activities may take place, particularly where heavy industry may not be appropriate.

4.11.2 Land Use and Planning (XI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project is located in an undeveloped area north of the City of Mt. Shasta. Adjacent uses include the Black Butte Transfer Station to the east, the Sousa Ready Mix Springhill Mine aggregate quarry to the southeast, a trailer storage area, vacant land and Blue Star Gas (propane distributor) to the south, I-5 to the west and three large-lot single family homes to the north. The nearest home is approximately 185 feet north of the Project site boundary and 650 feet north of the nearest proposed area of development (contractor's yard). The Project would not divide an established community. As such, the Proposed Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As discussed previously, the County General Plan does not use land use designation to define uses but uses a series of maps to identify where development should not be located. As such, there is not a defined General Plan land use designation for the Project site. An analysis was completed to determine how the Project site complies with these General Plan maps. *Table 4.11-1* identifies if the Project site is located within in an area recognized in any of the General Plan maps. As shown, the site is not located in an area determined by the General Plan to be affected by natural constraints except for wildfire hazards. General Plan Policy 30 states that "all development proposed within a wildfire hazard area shall be designed to provide safe ingress, egress, and have adequate water supply for fire suppression purposes in accordance with the degree of wildfire hazard."

The potential for a wildfires hazard was discussed in Item 4.8.2(h) previously. As discussed, the Project is reviewed by CAL FIRE and the County Building Department and would be required to be constructed with fire suppression infrastructure as required by CAL FIRE and the CBC. Implementation of these requirements would reduce the potential wildfire impacts to a less than significant level. As such the Project would not conflict with General Plan Policy 30 and there would be no impact in this area.

Table 4.11-1. General Plan Maps Analysis

Map	Located within identified constraint area?		Map	Located within identified constraint area?	
	Yes	No		Yes	No
Map 1: Geologic Hazard		X	Map 7: Flood Hazard		X
Map 2: Soils: Erosion Hazard		X	Map 8: Surface Hydrology		X
Map 3 Soils: Building Foundations Limitations		X	Map 9: Deer Wintering Areas		X
Map 4: Soils: Severe Septic Tank Limitations		X	Map 10: Wildfire Hazard	X	
Map 5: Excessive Slope		X	Map 11: Woodland Productivity		X
Map 6: Water Quality		X	Map 12: Prime Agricultural Soils		X

The County zoning code identifies the site as being within the AG-2 zoning district. The Project's proposed uses would not be consistent with this zoning designations. As such, the Project includes a request to change the zoning from AG-2 to M-M. Maintenance services and contractors' yards are a permitted use in the M-M district. The change in zoning requires review and approval by the County Board of Supervisors. If this change is denied by the Board, the Project cannot occur as proposed. Approval of change in zoning by the Board of Supervisors would allow the development of the Project site as proposed and upon approval, the Project would not conflict with the County zoning for the site. As such, this would be a less than significant impact.

4.11.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.12 Mineral Resources

4.12.1 Environmental Setting

The state-mandated Surface Mining and Reclamation Act of 1975 requires the identification and classification of mineral resources in areas within the State subject to urban development or other irreversible land uses that could otherwise prevent the extraction of mineral resources. These designations categorize land as Mineral Resource Zones (MRZ-1 through MRZ-4).

The Springhill Mine, which is an open pit, sand and gravel mine, is located 0.3 mile southeast of the Project site. However, while this mine is in close proximity to the Project site, neither the County nor the California DOC Division of Mine Reclamation (DMR), identifies the Project site as a mineral resource zone (Siskiyou County 1997; DMR 2018).

4.12.2 Mineral Resources (XII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

As discussed above, neither the County nor DMR identify the Project site as having the mineral resources. Therefore, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is not identified as a mineral resource recovery site by the County or DMR. There would be no impact in this area.

4.12.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.13 Noise

4.13.1 Environmental Setting

Noise Fundamentals

Noise is generally defined as sound that is loud, disagreeable, or unexpected. The selection of a proper noise descriptor for a specific source is dependent on the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels/community noise equivalent level (in $L_{dn}/CNEL$).

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks, and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Mobile transportation sources, such as highways, and hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 decibels (dBA) per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance from the

source. Noise generated by stationary sources typically attenuates at a rate of approximately 6.0 to 7.5 dBA per doubling of distance from the source (USEPA 1971).

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the “line of sight” between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise but are less effective than solid barriers.

Sensitive Noise Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The Project site is located in a rural area, the nearest noise-sensitive land use receptor is a single-family residence located approximately 185 feet north of the Project site boundary and 650 feet north of the nearest proposed area of development (contractor’s yard).

Existing Ambient Noise Environment

The major noise sources in the vicinity of the Project include roadway noise traffic from I-5, local traffic on Spring Hill Drive and the Black Butte Landfill Transfer Station adjacent to the Project’s eastern boundary. The City of Mt. Shasta conducted ambient noise measurements at the corner of the Spring Hill Drive/Abrams Lake Road intersection, approximately 0.3 mile south of the Project site, in support of the City of Mt. Shasta General Plan Noise Element (2007). According the City of Mt. Shasta General Plan Noise Element (2007), this area generally experiences noise levels of approximately 45 dBA.

Existing Roadway Noise Levels

The predominate source of noise in the Project area is I-5. Existing I-5 noise levels were calculated for the segment of I-5 traversing in the Project vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and traffic volumes from the California Department of Transportation (Caltrans, 2017). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels.

The average daily noise level along the segment of I-5 traversing the Project vicinity (from the Abrams Lake Road interchange to Deetz Road, is 69.2 CNEL at 100 feet from the centerline of the roadway. CNEL

is 24-hour average noise level with a 5 dBA “weighting” during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The Project site is located approximately 400 feet from I-5 at the nearest. The average daily traffic-noise level at this nearest portion of the Project site is 58.3 dBA (see *Appendix D*).

Vibration Fundamentals

Ground vibration can be measured several ways to quantify the amplitude of vibration produced. This can be through peak particle velocity or root mean square velocity. These velocity measurements measure maximum particle at one point or the average of the squared amplitude of the signal, respectively. Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual’s sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures.

4.13.2 Noise (XIII.) Environmental Checklist and Discussion

Would the Project result in	Potentially Significant Impact	Less than Significant With 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 applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

It is difficult to specify noise levels that are generally acceptable to everyone; what is annoying to one person may be unnoticed by another. Standards may be based on documented complaints in response to documented noise levels, or based on studies of the ability of people to sleep, talk, or work under various noise conditions. However, all such studies recognize that individual responses vary considerably. Standards usually address the needs of the majority of the general public.

Construction Noise

The County of Siskiyou does not regulate noise generated by construction, as construction at any given site is temporary and generally expected and tolerated by residents as a typical occurrence. However, a discussion of construction noise impacts is included for full disclosure purposes. Construction of the Proposed Project would result in a temporary short-term increase of noise levels in the Project vicinity. The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment and the prevailing wind direction. The noise levels for various types of construction equipment that could be required during construction of the Proposed Project are provided in *Table 4.13-1*.

Table 4.13-1. Typical Noise Levels from Construction Equipment

Equipment	Typical Noise Level (dBA) at 50 Feet from Source
	L_{eq}
Air Compressor	73.7
Backhoe	73.6
Compactor (Ground)	76.2
Concrete Mixer Truck	74.8
Concrete Mixer (Vibratory)	73.0
Concrete Pump Truck	74.4
Concrete Saw	82.6
Crane	72.6
Dozer	77.7
Drill Rig Truck	72.2
Excavator	76.7
Front End Loader	75.1
Generator	77.6
Gradall	79.4
Grader	81.0
Hydraulic Break Ram	80.0
Jackhammer	81.9
Impact Hammer/Hoe Ram (Mounted)	83.3
Pavement Scarifier/Roller	82.5
Paver	74.2
Pneumatic Tools	82.2
Pumps	77.9
Roller	73.0
Truck (Dump/Flat Bed)	72.5

Source: Federal Highway Administration, Roadway Construction Noise Model (FHWA-HEP-05-054), dated January 2006.

During the construction phase of the Project, exterior noise levels resulting from construction could affect nearby sensitive receivers, the nearest of which includes a residential property positioned approximately 650 feet north of the proposed development area. As shown in *Table 4.13-1*, noise levels associated with individual construction equipment used for typical construction project activities can reach levels of up to approximately 83.3 dBA L_{eq} at a distance of 50 feet. Noise levels decrease at a rate of approximately 6 dB per doubling of distance for a stationary point or source. At the nearest residence, maximum average noise activities for a single piece of equipment would attenuate to approximately 61.6 dBA, at the loudest. It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the single nearest point to the affected residence.

As previously described, the Project area has been subject to previous noise measurements identifying noise levels of approximately 45 dBA L_{eq} (City of Mt. Shasta, 2007). Additionally, traffic on I-5 is a

predominate noise source in the area and is currently generating noise levels of 58.3 dBA CNEL at a distance of up to 400 feet. The County of Siskiyou does not regulate construction-generated noise and therefore the construction of the Proposed Project would not exceed a County standard. However, construction noise would represent a noticeable, though temporary increase of noise and as such, mitigation of this impact is required. Mitigation measure **NOI-1** contains BMPs for reducing construction-generated noise impacts to a less than significant level.

Operational Noise

Project Land Use Compatibility

The County Noise Element includes a land use compatibility table (Table 13 of the Siskiyou County General Plan Noise Element) that provides the County with a tool to gauge the compatibility of new land uses relative to existing noise levels. This table identifies the ranges of acceptable noise levels for a variety of land use types. Specifically, noise levels of 65 dBA L_{dn} and less are identified as an acceptable noise environment for industrial-type land uses, such as proposed by the Project. As previously described, the major noise sources in the vicinity of the Project include roadway noise traffic from I-5, local traffic on Spring Hill Drive and the Black Butte Landfill Transfer Station adjacent to the Project's eastern boundary. The City of Mt. Shasta conducted ambient noise measurements at the corner of the Spring Hill Drive/Abrams Lake Road intersection, approximately 0.3 mile south of the Project site, in support of the City of Mt. Shasta General Plan Noise Element (2007). According the City of Mt. Shasta General Plan Noise Element (2007), this area generally experiences noise levels of approximately 45 dBA. This data contained in the City of Mt. Shasta General Plan Noise Element (2007) was verified using the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) coupled with traffic volumes identified by Caltrans (Caltrans 2017), which estimates an average daily traffic-noise level at the nearest portion of the Project site of 58.3 dBA (see *Appendix D*). These noise levels range between levels below the land use compatibility threshold of 65 dBA, and therefore Project site is considered an appropriate noise environment to locate proposed industrial-type land uses.

Project Operations - On-Site Noise Sources

Noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise-sensitive and may warrant unique measures for protection from intruding noise. Nearby noise-sensitive land uses consist of a single-family residence located approximately 185 feet north of the Project site boundary and 650 feet north of the nearest proposed area of development (contractor's yard). The County Noise Element identifies an acceptable noise environment of 60 dBA for residential land uses.

Onsite operational noise sources associated with the Proposed Project include mobile and stationary (i.e., mechanical equipment, internal truck movements, proposed shop activities) sources. Project noise from onsite sources have been calculated with the SoundPLAN 3D noise model, which predicts noise levels based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers. *Table 4.13-2* shows the

predicted Project noise levels at the nearest noise-sensitive land uses as a result of Project stationary noise sources, as modeled by the SoundPLAN 3D noise model. Also see *Figure 5. Noise Contours*.

Table 4.13-2. Noise Levels at the Nearest Sensitive Receptors from Project Onsite Sources

Description	Estimated Exterior Noise Level @ Sensitive Receptor 650 Feet to Northwest	Estimated Exterior Noise Level @ Sensitive Receptor 1,430 Feet to Northwest	Estimated Exterior Noise Level @ Sensitive Receptor 1,655 Feet to Northwest	Noise Standard (dBA)	Exceed Standard?
Combined Project On-Site Source Noise Level (Truck Movements, Shop Activity)	59.6	54.0	50.0	60	No

Source: Onsite source noise levels were calculated by ECORP using the SoundPLAN 3D noise model. Refer to *Appendix D* for noise modeling assumptions and results.

As shown, predicted Project onsite noise would not surpass the County noise standard at any of the nearest sensitive receptors.

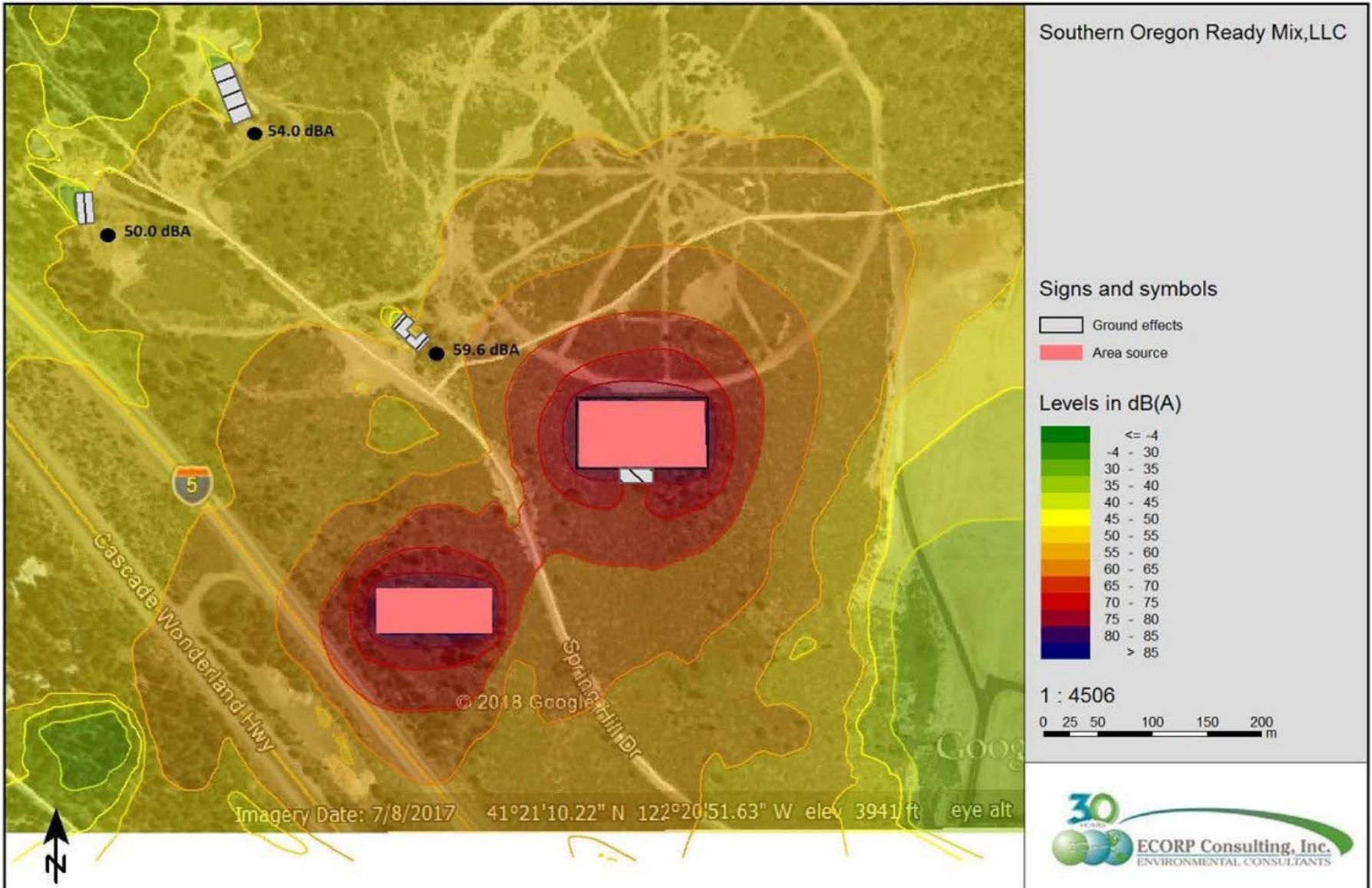
Project Operations - Offsite Project Traffic Noise

Project operation would also result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the project vicinity. As described under Subsection 4.17, completion of the Proposed Project is estimated to result in a daily maximum of 30 trips (counting to and from the site) over a three to four-month period. This would result in a maximum of 30 new vehicle trips on Spring Hill Drive in the 7:00 a.m. to 5:00 p.m. time period. According to Caltrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013), doubling of traffic on a roadway would result in an increase of 3 dB (a barely perceptible increase). The Proposed Project's maximum daily trips (30) would be nominal compared to the current vehicle trips in the Project area, and thus, would not result in a perceptible increase traffic noise levels. Traffic noise impacts associated with the Project would be less than significant.



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ENVIRONMENTAL CONSULTANTS

Figure 5. Noise Contours
So. Oregon Ready Mix (Z1804) Project



Would the Project result in		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Construction Impacts

Construction operations have the potential to result in varying degrees of temporary ground vibration and noise levels, depending on the specific construction equipment used and operations involved. The ground vibration levels associated with various types of construction equipment are summarized in *Table 4.13-3*. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effects of ground vibration may be imperceptible at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels.

Table 4.13-3. Typical Construction Equipment Vibration Levels

Equipment Type	Peak Particle Velocity at 50 Feet (inches per second)
Large Bulldozer	0.042
Caisson Drilling	0.042
Loaded Trucks	0.035
Jackhammer	0.016
Small Bulldozer/Tractor	0.001

Source: Federal Transit Administration (FTA) 2018

The County does not regulate vibration associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans's (2004) recommended standard of 0.2 inches per second peak particle velocity with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. The nearest structures to any of the construction areas are residences north of the Project site, approximately 650 feet away. Based on the vibration levels presented in *Table 4.13-3*, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.042 inches per second peak particle velocity at 50 feet. Since predicted vibration levels at the nearest structures would not exceed recommended criteria and because the County does not regulate vibration associated with construction, no impact would occur.

Operational Impacts

Once operational, the Project would not be a source of groundborne vibration or groundborne noise. Additionally, the County does not regulate vibration associated with operations. For these reasons, there is no impact.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project Area to excessive noise levels?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The nearest airport to the Project site is the Dunsmuir Muni-Mott Airport, located approximately seven miles south of the Project site. The Project site is not located within an area covered by an airport land use plan or within two miles of a public or private use airport. Thus, no impact would occur with implementation of the Proposed Project.

4.13.3 Mitigation Measures

NOI-1: The following best management practices shall be incorporated during Project construction.

- Project construction activities should be limited to daytime hours unless conditions warrant that certain construction activities occur during evening or early morning hours.
- Locate stationary construction equipment as far as possible from the nearby noise-sensitive properties.
- Notify the nearby residence whenever extremely noisy work (e.g., pile driving, use of pneumatic drill) would be occurring.
- Shut off idling equipment.
- Install temporary or portable acoustic barriers around stationary construction noise sources.

Timing/Implementation: During Project grading and construction activity.

Monitoring/Enforcement: Siskiyou County

4.14 Population and Housing

4.14.1 Environmental Setting

The Project site is located in a sparsely populated area. The only residential units within the area are three single family homes located north of the Project site. However, there is rural residential development west of I-5 approximately ¼ mile from the Project site. The nearest population center is the City of Mt. Shasta of which the city's northernmost boundary borders the site. U.S. Census Bureau (U.S. Census) data shows that the 2017 population of the City of Mt. Shasta decreased by 4.0 percent in the City between 2010 and 2017, from 3,416 to 3,281 (U.S. Census 2018). Census information also shows that the number of persons in the 96067 zip code, which includes Mt. Shasta and the surrounding area, also decreased from 7,165 to 6,991 during the same time period. According to the California Department of Finance (DOF), which provides estimated population and housing unit demographics by year throughout the state, there were

1,899 total housing units in the City, and a 12.6 percent vacancy rate as of January 1, 2018. The average household size was estimated to be 2.02 persons per household during the same time period. (DOF 2018).

4.14.2 Population and Housing (XIV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project does not include the construction of any new homes. Development of the Project would not extend any roads or public infrastructure. Therefore, direct or indirect increases in population growth would not occur as a result of the Proposed Project.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No persons or residences would be displaced or removed as a result of the Proposed Project, and the Project would have no impact in this area.

4.14.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.15 Public Services

4.15.1 Environmental Setting

Public services include fire protection, police protection, parks and recreation, and schools. Generally, impacts in these areas are related to an increase in population from a residential development. Levels of service are generally based on a service-to-population ratio, except for fire protection, which is usually based on a response time.

Police Services

Police protection services at the project site are provided by the Siskiyou County Sheriff's Department. The Siskiyou County Sheriff's Department consists of the Custody Division, Court Security, Patrol Division, Detectives, Special Response Team, Marijuana Eradication Team, Civil Division, Coroner, Dispatch, Dive

Team, K9 and Search and Rescue. The nearest Sheriff's Department substation is located at 241 Ski Village Drive, Mt. Shasta, located approximately 2.5 road miles from the site. Additionally, the California Highway Patrol and Mt. Shasta Police Department are both located within three miles of the Project site. These agencies are likely to provide additional support to the Sheriff's Department in case of an emergency.

Fire Services

Fire protection services for the Project site are provided by the Mt. Shasta Fire Protection District (MSFPD) and the site is also located in a CAL FIRE State Responsibility Area. The MSFPD station is located at 600 Michele Drive, approximately 4.5 road miles south of the site. Additionally, the Mt. Shasta Fire Department, located at 303 North Mount Shasta Boulevard, is approximately 3.3 driving miles from the Project site.

Schools

The area is served by the Mt. Shasta Union Elementary School District for kindergarten through grade eight and the Siskiyou Union High School District for high school-aged children in grades 9 through 12. The nearest schools are Mt. Shasta Elementary (K-3), Sisson School (grades 4-8) and Mt. Shasta High School (grades 9-12). Both school districts impose development fees on new construction to offset any impact development would have on increased enrollment.

Parks

Recreational opportunities for both youth and adults are varied and plentiful in the Project area. The Upper Sacramento River and Lake Siskiyou provide opportunities for water recreation, including boating, swimming, fishing, and other outdoor activities. The Mt. Shasta Ski Park, approximately 5.5 miles northeast of the Project site, includes opportunities for downhill and cross-country skiing as well as summer activities such as hiking and mountain biking. In addition, the Mt. Shasta Recreation and Parks District operates Mt. Shasta City Park, Shastice Park, and youth sports fields at Sisson School. Features at these three facilities include playgrounds, walking and hiking paths, picnic and barbeque facilities, sports and recreational areas, skateboard park, and a roller/ice skating rink.

Other Public Facilities

Other public facilities found in the Project vicinity include the Siskiyou County Library – Mt. Shasta Branch, the U.S. Postal Service Mt. Shasta post office, and public lands owned and administered by the Bureau of Land Management and the U.S. Forest Service.

4.15.2 Public Services (XV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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 public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Fire Services

The Project site is located approximately 4.5 miles from the Mt. Shasta Fire Protection District station. The Proposed Project would not result in an increase in population and thereby not require additional fire facilities to serve this population. The Proposed Project would not require any additional Fire District facilities, equipment, and/or staff and is not anticipated to create an additional burden on existing fire facilities. The Project would be subject to the fire protection regulations defined in PRC 4290. Code 4290 provide requirements for road and street networks, driveways designs, road signage, water requirement standards and fuel modification/removal areas. Therefore, the Project would have a less than significant impact in this area.

Police Services

The Proposed Project would not result in a significant increase in demand for police protection resulting in new or expanded police facilities. Police facilities and the need for expanded facilities are based on the staffing levels these facilities must accommodate. Police staffing levels are generally based on the population/police officer ratio, and an increase in population is usually the result of an increase in housing or employment. Because the Proposed Project would not increase the population in the area, the Project would not result in the need for increase in police protection or police facilities. Therefore, the Proposed Project would have a less than significant impact in this area.

Schools

The purpose of the Proposed Project is the establishment of a concrete grindings washout basin and maintenance yard. This development will not result in an increase of student population. The Proposed Project does not result in an increase in housing or population in the area, which would require additional educational facilities. Therefore, the Proposed Project would have no impact in this area.

Parks

As stated previously, the need for additional parkland is primarily based on an increase in population to an area. Given that the Proposed Project would not increase the city's population, the Project would not burden any parks in the surrounding area beyond capacity by generating additional recreational users. Therefore, the Proposed Project would not require the construction or expansion of park and recreational facilities and would also not result in an increase in demand for parks and recreation facilities in the surrounding area. There would be no impact to parks as a result of construction of the Proposed Project.

Other Public Facilities

The Proposed Project does not result in an increase in housing or population in the City resulting in library, post office, or other public facilities use. Therefore, the Project would have a less than significant impacts on other public facilities.

4.15.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.16 Recreation

4.16.1 Environmental Setting

The Upper Sacramento River and Lake Siskiyou provide opportunities for water recreation, including boating, swimming, fishing, and other outdoor activities. The Mt. Shasta Ski Park, approximately 5.5 miles northeast of the Project site, includes opportunities for downhill and cross-country skiing as well as summer activities such as hiking and mountain biking. In addition, the Mt. Shasta Recreation and Parks District operates Mt. Shasta City Park, Shastice Park, and youth sports fields at Sisson School. Features at these three facilities include playgrounds, walking and hiking paths, picnic and barbeque facilities, sports and recreational areas, skateboard park, and a roller skating/ice skating rink.

4.16.2 Recreation (XVI) Materials Checklist

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The need for additional parkland is primarily based on an increase in population to an area. Given that the Proposed Project would not increase population, the Project would not burden any parks in the surrounding area beyond capacity by generating additional recreational users. Therefore, the Proposed Project would not increase the use of park and recreational facilities resulting in substantial physical deterioration of the facility. There would be no impact to recreational facilities as a result of construction of the Proposed Project.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project would not result in the construction of recreational facilities. The Project would not require the construction or expansion of additional offsite recreational facilities. As such, the Proposed Project would have no impact in this issue area.

4.16.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.17 Transportation

4.17.1 Environmental Setting

Regional access to the Project site is provided by I-5, which link the site with other northern California communities to the north and south. Local access to the Project site is provided from the Abrams Lake Road exit from I-5 to Spring Hill Drive.

Important roadways in the vicinity of the Proposed Project include the following:

- I-5: I-5 is a north-south federal highway through California. It is a divided six-lane freeway adjacent to the Project site. According to Caltrans, I-5 at the Abrams Lake Road interchange had a Back Average Annual Daily Trip (AADT)⁶ count of 22,850 and a Forward AADT count of 22,450 in 2016 (Caltrans 2016). This indicates that, on average, 400 vehicles exited I-5 at the Abrams Lake Road interchange on a daily basis. According to this information all of these vehicles were heading north on I-5 prior to exiting the highway. See *Table 4.17-1*.

⁶ Annual average daily traffic is the total traffic volume for the year divided by 365 days.

Table 4.17-1. I-5 Traffic Counts – Year 2016

Roadway Interchange	Back AADT	Forward AADT	Number of Vehicles Exiting Highway
Abrams Lake Road – Right Alignment (Northbound)	12,300	11,900	400
Abrams Lake Road – Left Alignment (Southbound)	10,550	10,550	0

Source: Caltrans 2016

- Spring Hill Drive: Spring Hill Drive is a north-south two-lane rural road that connects North Mt. Shasta Boulevard to the Project site. South Spring Hill Drive terminates approximately 1,300 feet north of the Project site. This roadway provides access to the two major industrial uses in the area, Black Butte Transfer Station and the Sousa Ready Mix Springhill Mine. Traffic counts on Spring Hill Drive are not available. Based on roadway descriptions provided in the Siskiyou County General Plan Circulation Element (1988) and the sparse development on Spring Hill Drive, Spring Hill Drive would be classified as a “local street”⁷. The Circulation element does not provide LOS information for local streets. However, the 2016 Regional Transportation Plan (RTP) for Siskiyou County does provide this information defined as a rural local road as shown in *Table 4.17-2* below. The Circulation Element states. “The County should not accept a normal level of service of less than Level C”

Table 4.17-2. Maximum Daily Volume Thresholds for Roadways

Classification	Level of Service Threshold				
	A	B	C	D	E
Rural Local Road	600	2,000	3,500	4,900	5,500

Transit Service

Siskiyou Transit and General Express (STAGE) is the County’s public transit service provider. The STAGE office is located at 190 Greenhorn Road in Yreka. Busses run Monday through Friday from 6 a.m. to 9 p.m., except on County holidays. Routes are based on a fix-route system. STAGE offers six different routes that serve the entire County. Specific departure and arrival times depend on the trip origin and destination. There are no bus stops near the Project site. The closest bus stop is located on North Mt. Shasta Boulevard approximately two miles south of the site.

Pedestrian and Bicycle Facilities

There are no existing sidewalks surrounding the Project site. There are no bicycle facilities adjacent to the Project site.

⁷ The General plan defines local street as “These facilities provide access to subdivisions lots of 20 homes or less.”

4.17.2 Transportation (XVII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Siskiyou County General Plan Circulation Element (1988), the 2016 Siskiyou County RTP (2016), and the Coordinated Public Transit – Human Services Transportation Plan (2015) provide guidance in the County for existing and future transportation facilities. There are no exiting bicycle, pedestrian or public transportation facilities on or adjacent to the site. There are no future bicycle, pedestrian or public transportation facilities planned to be on or adjacent to the site in any of these documents. The Proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system in any of these documents. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Guidelines Section 15064.3, subdivision (b) provides criteria for analyzing transportation impacts based on a vehicle miles traveled (VMT) methodology instead of the now superseded (as of January 1, 2019) LOS methodology. Pertinent to the Proposed Project are those criteria identified in § 15064.3(b)(1) Land Use Projects. According to this section:

“Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor⁸ should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.”

However, Section 15064.3(b)(3) allows an agency to determine a project’s transportation impact on a qualitative basis if a VMT methodology is unavailable, as is the case with the Proposed Project.

Section 15064.3(b)(3) is as follows:

⁸ “High-quality transit corridor” means an existing corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. For the purposes of this Appendix, an “existing stop along a high-quality transit corridor” may include a planned and funded stop that is included in an adopted regional transportation improvement program.

“Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project’s vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.”

Additionally, Section 15064.3(c) allows an agency to use the VMT methodology immediately or defer until July 1, 2020 when the VMT methodology is required of all agencies in the state. Section 15064.3(c) is as follows:

“The provisions of this section shall apply prospectively as described in section 15007. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide.”

Because the County does not have an adopted VMT methodology at this time, for the Proposed Project, the County chooses to defer to the existing LOS methodology to determine the Project’s impact to County roadways.

The number of vehicle trips from the Proposed Project is based on the number of employees and vehicles that would use the site as discussed in *Section 2.0 Project Description*. Completion of the Proposed Project is estimated to result in a daily maximum of 30 trips (counting to and from the site) over a three to four month period. This would result in an estimated maximum of 30 new vehicle trips on Spring Hill Drive in the 7:00 a.m. to 5:00 p.m. time period or an average of three per hour.

Spring Hill Drive does not have any recorded traffic counts. However, based on the information provided in the General Plan and the RTP, an unacceptable LOS for this roadway would be LOC C and would be more than 3,500 daily trips. Generally, access to the Project site for employees and trucks would be from I-5 via Abrams Lake Road. According to Caltrans (2016), the number of vehicle trips existing the I-5 at the Abram Lake Road interchange averages 400 AADT. A portion of these vehicles would proceed west on Abrams Lake Road to access the residential uses on the west side of I-5. As such, not all of the 400 I-5/Abram Lake Road interchange trips would travel onto Spring Hill Drive. While no traffic counts are available for Spring Hill Drive, traffic on this roadway would be relatively minor because of the limited amount developed uses on Spring Hill Drive. The only exiting uses on Spring Hill Drive include a tire shop south of the Abram Lake Road/Spring Hill Drive intersection and the Black Butte Transfer Station, the Sousa Ready Mix Springhill Mine, a propane distributor, and three large-lot single family homes. The largest producer of vehicle trips on this road would be the tire shop, estimated to be approximately 298 trips per day (Institute of Transportation Engineers [ITE] 2019) and the Black Butte Transfer Station at 207 trips per day (California Department of Resources Recycling and Recovery [CalRecycle] 2016). Combined, these uses would not exceed the rural local road LOS C limit of 3,500 daily trips. As such, the addition of a maximum of 30 daily trips from the Proposed Project would not increase vehicle trips beyond the County’s LOS standards for a rural local road. Therefore, the Proposed Project would have a less than significant impact in this area.

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

No modifications to roadway features are proposed as part of the Project. The Project would construct four new driveways connecting the Project site to Spring Hill Drive. These driveway/roadway interfaces would be required to be located and constructed according to County roadway standards. Therefore, the Project would have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Project design provides four access points from Spring Hill Drive. Therefore, the Project would have a less than significant impact regarding emergency access.

4.17.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.18 Tribal Cultural Resources

4.18.1 Environmental Setting

The following information was provided by the Genesis Society (2018) as a part of the Cultural Resources Inventory Report for the Proposed Project.

The Project area is located within lands traditionally claimed by the Shasta Native Americans. The basic social unit for the Shasta was the family, although the village may also be considered a social, as well as a political and economic, unit. Villages were usually located on flats adjoining streams, and were inhabited primarily during winter months as it was necessary to go out into the hills and higher elevation zones to establish temporary camps during food gathering seasons (i.e., spring, summer, and fall).

As with all northern California Indian groups, economic life for the Shasta revolved around hunting, fishing and the collecting of plant foods, with deer, acorns, and fish representing primary staples. The collection and processing of these various food resources was accomplished with the use of a wide variety of wooden, bone and stone artifacts. These people were very sophisticated in terms of their knowledge of the uses of local animals and plants, and of the availability of raw material sources that could be used in manufacturing an immense array of primary and secondary tools and implements. However, only

fragmentary evidence of their material culture remains, due in part to perishability, and in part to the impacts to archaeological sites resulting from later (historic) land uses.

Based on the results of previous survey work in this area of the County, a range of prehistoric site types has been documented within this portion of the County, including habitation sites associated surface scatters, surface scatters without middens, small surface features such as rock walls and alignments, petroglyphs, food processing stations (including mortar holes and metate slicks), and isolated flakes and flaked-stone artifacts. Clearly, not all of these site types were expected to be present within the present Project area, but rather these were considered the most likely types to be encountered if any sites or features were discovered at all.

4.18.2 Tribal Consultation

The Genesis Society contacted the California NAHC on December 13, 2018, to request a search of the Sacred Lands File for the APE. This search can determine whether or not Sacred Lands have been recorded by California Native American tribes within the APE, because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. In requesting a search of the Sacred Lands File, Genesis Society solicited information from the Native American community regarding tribal cultural resources. The search of the Sacred Lands File by the NAHC (December 17, 2018) failed to indicate the presence of Native American cultural resources in the Project area (Genesis Society 2018).

AB 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. Siskiyou County sent notice to Karuk Tribe, Winnemem Wintu Tribe, Torres Martinez Band of Desert Cahuilla Indians about the Project in October 2018. The County did not receive any consultation request from the Shasta Tribe. None of the tribes requesting consultation provided comments on the Proposed Project.

4.18.3 Tribal Cultural Resources (XVIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 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, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No known cultural resources or significant archaeological resources have been identified within the Project area. The site has not been identified as either a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe. However, unanticipated, and accidental discovery of California Native American tribal cultural resources are possible during project implementation, especially during excavation, and have the potential to impact unique cultural resources. As such, mitigation measure **CUL-1** has been included to reduce the potential for impacts to tribal cultural resources to a less than significant level.

4.18.4 Mitigation Measures

Implement mitigation measure **CUL-1**.

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

Water Service

No water service companies/agencies provide water to the Project area. The Project would obtain water through a groundwater well on the Project site. The Siskiyou County Environmental Health Division would be responsible for evaluation and approval of the well and water distribution system.

Wastewater

No wastewater treatment and disposal are available to the site. The Project would dispose of wastewater through an onsite septic system to be developed as a part of Project. The Siskiyou County Environmental Health Division would be responsible for evaluation and approval of the septic system.

Storm Drainage

The Project is located in an area with no formal storm drainage system. Stormwater runoff would be managed through existing natural drainages and infiltration.

Solid Waste

The Siskiyou County Integrated Solid Waste Management Regional Agency manages solid waste and green waste collection and disposal in the county. As shown in *Table 4.19-1*, the majority of the County's solid waste is exported to Oregon.

Table 4.19-1. Solid Waste Disposal Facilities Used by the Siskiyou County Integrated Solid Waste Management Regional Agency

Destination Facility	Solid Waste Disposal (tons/year)			Landfill Information		
	2015	2016	2017	Remaining Capacity (cubic yards)	Remaining Capacity Date	Cease Operation Date
Altamont Landfill	-	-	3.69	65,400,000	12/31/2014	1/1/2025
Anderson Landfill Inc.	72.42	262.09	149.61	7,184,701	3/1/2017	12/1/2023
Forward Landfill Inc.	5.60	10.81	-	22,100,000	12/3/2012	1/1/2020
McKittrick Waste Treatment	-	-	15.78	769,790	4/5/2012	12/31/2059
Potrero Hills Landfill	7.9	2.91	22.87	13,872,000	1/1/2006	2/14/2048
Recology Hay Road	5.33	18.18	67.36	30,433,000	7/28/2010	1/1/2077
Recology Ostrom Road LF Inc.	5.75	1.00	-	39,223,000	6/1/2007	12/31/2066
West Central Landfill	4.15	40.38	46.17	22,100,000	12/31/2012	1/1/2020
Exported to Oregon	35,204.56	37,090.34	40,264.40	N/A	N/A	N/A
Yearly Total	35,305.71	37,425.70	40,569.88			
Average per Resident (lbs/day)	4.3	4.6	N/A			
Average per Employee (lbs/day)	15.4	15.8	N/A			

Source: CalRecycle 2019a, b, and c

4.19.2 Utilities and Service Systems (XIX) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Water

The Project would obtain water from an onsite groundwater well. This well would be used to provide water to the restroom facilities and for drinking water. The Project would not connect to a public water treatment facility or public water infrastructure. Therefore, the Project would have no impact in this area.

Wastewater

The Project would treat wastewater through an onsite septic system. The Project would not connect to a public wastewater treatment facility or public water infrastructure. Therefore, the Project would have no impact in this area.

Storm Drainage

Implementation of the Proposed Project would increase the amount of impervious surface on the Project site, which would result in an increase in stormwater runoff. However, no public storm drainage system exists onsite or within the adjacent roadways. All stormwater would be absorbed into the ground or be accommodated by existing natural drainage. Therefore, the Project would have no impact in this area.

Electric Power

The Project would be served by Pacific Power and connection to the Pacific Power powerlines will be necessary. However, no new Pacific Power facilities will be required to provide electricity to the Project. Therefore, the Project would have no impact in this area.

Natural Gas

There are no natural gas facilities in that area. The Project would not be served by natural gas. There would be no impact to natural gas facilities as a result of implementation of the Project.

Telecommunications

Telecommunication will be through existing company and personal cell phones. No new telecommunication facilities will be required to serve the Project.

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project would obtain water from an onsite groundwater well. This well would be used to provide water to the restroom facilities and for drinking water. the Project would not connect to a public water treatment facility or public water infrastructure. Therefore, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Project would treat wastewater through an onsite septic system. the Project would not connect to a public wastewater treatment facility or public water infrastructure. Therefore, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

According to CalRecycle (2019c), the estimated solid waste generation rates for employees is 15.4 pounds per employee per day. Based on this information and an anticipated maximum of four employees at full operation of the Project, the Project would produce approximately 61.6 pounds per day (lbs/day). Assuming a four-month/five-days-per-week construction period when employees are on the site, the total estimated solid waste during the period would amount to 2.47 tons annually.⁹

As shown in *Table 4.19-1*, the County exports approximately 99 percent of its solid waste disposal to Oregon. The Proposed Project's annual solid waste of 2.47 tons represents 0.007 percent increase in the exported solid waste. As such, the Proposed Project would not substantially increase solid waste exported

⁹ 61.6 lbs/day X 80 days / 2000 lbs/ ton = 2.47 tons per year.

by the County. All solid waste companies exporting solid waste from the County to Oregon are under contract with the various landfills in Oregon. If at such time these landfills determine that there is insufficient capacity to accommodate the amounts of waste coming from Siskiyou County, then additionally facilities will need to be found. However, the minor amount of solid waste that would be generated by the Proposed Project would not result in a determination of insufficient capacity. As such, this is a less than significant impact.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e)	Comply with federal, state, and local statutes and management and reduction regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project is required to comply with all state and federal statutes regarding solid waste. This impact is considered less than significant.

4.19.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.20 Wildfire

4.20.1 Environmental Setting

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface-area-to-mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface-area-to-mass ratio and require more heat to reach the ignition point.

CAL FIRE has designated the Project site as being within an area having a very high wildland fire potential (CAL FIRE 2007).

4.20.2 Wildfire (XX) Environmental Checklist and Discussion

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project includes the construction of a contractor's yard, a 4,000-square-foot floor shop building, and a concrete grinding residue washout basin. Additionally, the Project would construct four driveways onto

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Spring Hill Drive to provide access to the site. None of these uses would occur within a roadway used as a part of an adopted emergency response plan or emergency evacuation plan. The Project would have no impact in this area.

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

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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The Project is reviewed by CAL FIRE and the County Building Department and would be required to be constructed with fire suppression infrastructure as required by CAL FIRE and the CBC. Additionally, the Project would grade and then gravel the contractor's yard, which covers approximately six to seven acres. Removal of natural vegetation from this area would reduce the potential of wildfire for this area and provide a fuel break if a fire were to occur in the surrounding area. Implementation of the CAL FIRE and the CBC requirements as well as a large graveled parking/storage area would reduce the potential wildfire impacts to a less than significant level.

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

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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The Proposed Project would be developed on a property adjacent to an existing paved road and no new roads would be required to access the Project site. Water supply and wastewater disposal would be provided by an onsite well and septic system. The installation and maintenance of this infrastructure is not known to exacerbate the potential for causing a wildfire.

Electrical power would be provided by Pacific Power, which has existing powerlines in the area. All new electrical transmission lines constructed to provide power to the Project would be required to adhere to the latest requirements for these types of uses including those implemented to reduce the potential for causing a fire. Following is a list of requirements implemented to reduce the potential for causing a fire from electrical transmission lines by the State of California.

- General Order 95, issued by the California Public Utilities Commission (CPUC), requires a year-round clearance below power lines of a minimum 18 inches. New fire safety regulations require a

minimum clearance of four feet year-round for high-voltage power lines in the CPUC-designated High Fire-Threat Districts.

- PRC § 4292 is administered by CAL FIRE. It requires that electrical utility companies maintain a firebreak of at least 10 feet in radius of a utility pole, with tree limbs within the 10-foot radius of the pole being removed up to eight feet above ground. From eight feet to conductor height requires removal of dead, diseased or dying limbs and foliage. This applies in the State Responsibility Area during designated fire season.
- PRC § 4293, also administered by CAL FIRE, requires a four-foot minimum clearance be maintained for power lines between 2,400 and 72,000 volts, and a 10-foot clearance for conductors 115,000 volts and above. PRC 4293 also requires the removal of dead, diseased, defective and dying trees that could fall into the lines. This applies in the State Responsibility Area during designated fire season.
- Following the Governor's January 2014 Drought State of Emergency Proclamation, the CPUC issued Resolution ESRB-4. The resolution directs utilities to take practicable measures necessary to reduce the likelihood of fires. Those measures include increasing vegetation inspections; removing hazardous, dead and sick trees and other vegetation near electric power lines and poles; sharing resources with CAL FIRE to staff lookouts adjacent to the utilities' property; and clearing access roads under power lines for fire truck access.

Implementation of those requirements identified above would reduce the potential for wildfire caused from new electrical transmission lines serving the Project to a less than significant impact.

The Project would have a less than significant impact in this area.

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

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

No recent wildfires have occurred in the Project area. The closet wildfire to occur within the past year (2018) was the Shastina Fire (13 miles north) or the Delta Fire (14.5 miles south) (CAL FIRE 2019). The Project site and surrounding area are well vegetated and as such the exposure people or structures to significant risks due to post-fire flooding, landslides or slope instability would not occur at this time.

No rivers, creeks or streams existing on or in the area of the Project. While the Project site is within an area of undulating slopes, these slopes are relatively small and gradual in elevation gain with no steep slopes. If a future wildfire were to occur in the area, because of no natural waterways or steep slopes in the area or on the Project site, the potential for flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would be less than significant.

4.20.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.21 Mandatory Findings of Significance

4.21.1 Mandatory Findings of Significance (XXI) Environmental Checklist and Discussion

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

As discussed in *Section 4.5 Cultural Resources*, the Proposed Project would have potential impact cultural resources and tribal cultural resources. However, with implementation of mitigation measure **CUL-1**, this potential impact would be reduced to a level that is considered less than significant.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Implementation of the Proposed Project, in conjunction with other approved or pending projects in the region, has the potential to result in cumulatively considerable impacts to the physical environment. However, with implementation of mitigation measures proposed in the relevant subsections of this Initial Study, these potential impacts would be reduced to a level that is considered less than significant.

**Draft Initial Study and Mitigated Negative Declaration
Southern Oregon Ready Mix Rezone (Z1804) Project**

Does the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Direct and indirect impacts to human beings would be less than significant with the implementation of mitigation measures listed in this Initial Study.

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SECTION 6.0 BIBLIOGRAPHY

- Barnard Dunkelberg & Company. 2008. Draft Dunsmuir Municipal-Mott Airport, Airport Layout Plan Update. May 2008.
<https://static1.squarespace.com/static/54c9a764e4b0ee5502d31f04/t/58586b7dbebafbacfb1c5f80/1482189890976/1O6+Airport+Layout+Plan.pdf>.
- CAL FIRE. 2019. Statewide Incidents Map.
<https://www.google.com/maps/d/viewer?ll=36.51846598967593%2C-114.862060546875&hl=en&z=6&source=embed&ie=UTF8&mid=1HacmM5E2ueL-FT2c6QMVzoAmE5M19GAf&output=embed>.
- _____. 2007. Fire Hazard Severity Zones in SRA. Adopted November 7, 2007.
http://frap.fire.ca.gov/webdata/maps/Siskiyou/fhszs_map.31.pdf.
- CalRecycle. 2019a. Multi-year Countywide Origin Summary.
<https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Origin/CountywideSummary>.
- _____. 2019b. SWIS Facility/Site Search. <https://www2.calrecycle.ca.gov/SWFacilities/Directory/>.
- _____. 2019c. Countywide, Regionwide, and Statewide Jurisdiction Diversion / Disposal Progress Report.
<https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DiversionDisposal>.
- _____. 2016. Registration Permit – Black Butte Transfer Station.
<https://www2.calrecycle.ca.gov/swfacilities/Directory/47-AA-0056>.
- Caltrans. 2018. California Scenic Highway Mapping System.
http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.
- _____. 2017. 2016 Traffic Volumes on California State Highways. <http://www.dot.ca.gov/trafficops/census/>.
- _____. 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*.
- CAPCOA. 2009. Health Risk Assessments for Proposed Land Use Projects.
- CARB. 2014. EMFAC2014 Emissions Model.
- _____. 2013. *Facts about California's Sustainable Communities Plans*.
https://www.arb.ca.gov/cc/sb375/sacog_fact_sheet.pdf. Accessed: January 16, 2019.
- _____. 2018. Air Quality Standards and Area Designations. <https://ww3.arb.ca.gov/design/design.htm>.
- CDFW. 2019. BIOS on-line program. <https://apps.wildlife.ca.gov/bios/?al=ds277>.
- CGS. 2018. Data Viewer. <https://maps.conservation.ca.gov/geologic Hazards/#dataviewer>.
- _____. 2016. Earthquake Shaking Potential for California [map].
ftp://ftp.conservation.ca.gov/pub/dmg/pubs/ms/048/MS_048_revised_2016.pdf.
- _____. 2010. Regional Geologic Hazards and Mapping Program - Table 4 Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of January 2010.
<http://www.conservation.ca.gov/cgs/rghm/ap/Pages/affected.aspx>.

- _____. 2002. California Geomorphic Provinces.
http://www.conservation.ca.gov/cgs/information/publications/cgs_notes/note_36/Documents/note_36.pdf.
- _____. 1981. Geologic Map of the Sacramento Quadrangle.
ftp://ftp.consrv.ca.gov/pub/dmg/pubs/gam/GAM_026_Weed/
- City of Mt. Shasta. 2007. City of Mt. Shasta General Plan Noise Element.
- DOC. Division of Land Resource Protection. 2016. 2018a. Important Farmland Finder. Available at:
<http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: December 20, 2018.
- _____. 2018b. Data Viewer. <https://maps.conservation.ca.gov/geologichazards/#dataviewer>.
- _____. Siskiyou County Williamson Act FY 2015/2016. Available at: <ftp://ftp.consrv.ca.gov/pub/dlrp/wa>.
Accessed: December 20, 2018.
- DOF. 2018. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark. <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>.
- DMR. 2018. Mines Online. <http://maps.conservation.ca.gov/mol/index.html>.
- DTSC. 2018. Hazardous Waste and Substance Site List <http://www.envirostor.dtsc.ca.gov/public/>. Accessed December 21, 2018.
- DWR. 2018. Water Data Library.
https://gis.water.ca.gov/app/gicima/#bookmark_DepthBelowGroundSurface. Accessed December 26, 2018.
- _____. 2003. California's Groundwater Bulletin 118.
<https://water.ca.gov/LegacyFiles/urbanwatermanagement/2010uwmps/CA%20Water%20Service%20Co%20-%20Oroville/Appendix%20D%20-%20Basin.pdf>.
- ECDMS. 2019. Website: Electricity and Natural Gas Consumption by County.
<http://www.ecdms.energy.ca.gov/>.
- Engineering Toolbox. No date. Illuminance – Recommend Light Levels.
http://www.engineeringtoolbox.com/light-level-rooms-d_708.html.
- FEMA. 2011. FIRM Flood Insurance Rate Map. Map No. 06093C3025D. Effective Date June January 19, 2011.
- FHWA. 2006. *Roadway Construction Noise Model*.
- FTA. 2018 Transit Noise and Vibration Impact Assessment.
- Genesis Society. 2018. Cultural Resources Inventory Survey, Spring Hill Rezone Project, circa 35-acres, Siskiyou County, California. December 27, 2018.
- Google Earth. 2017. Imagery date 8/7/2017.
- ITE. ITE Trip Generation Rates – 9th ed.
- NCRS. 2018. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/>.
- SCAQMD. 1992 *Federal Attainment Plan for Carbon Monoxide*.

- Siskiyou County. 2016. 2016 Regional Transportation Plan. May 2016.
- _____. 2015. Coordinated Public Transit – Human Services Transportation Plan. January 28, 2015.
<https://www.co.siskiyou.ca.us/content/local-transportation-commission>.
- _____. 1997. *The County of Siskiyou General Plan*. <http://www.co.siskiyou.ca.us/content/planning-division-siskiyou-county-general-plan>.
- _____. 1988. Siskiyou General Plan Circulation Element.
- SRWP. 2018. Upper Sacramento River Subregion.
<http://sacriver.org/aboutwatershed/roadmap/watersheds/northeast/upper-sacramento-river>.
- SWRCB. 2018. Geotracker. Accessed December 21, 2018. <http://geotracker.waterboards.ca.gov>.
- UCMP. 2019. UCMP Locality Search – Siskiyou County. <https://ucmpdb.berkeley.edu/loc.html>
- U.S. Census. 2018. American Fact Finder. <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>.
- USEPA. 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.
- USGS. 2018. Areas of Land Subsidence in California. https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html. Accessed December 21, 2018.
- Weatherspark. 2018. Average Weather in Mount Shasta, California, United States.
<https://weatherspark.com/y/672/Average-Weather-in-Mount-Shasta-California-United-States-Year-Round>.
- WRM. 2019a. Wildland Resource Managers follow up Botany Survey Report for: Southern Oregon Ready Mix: Mt. Shasta Site. July 18, 2019.
- _____. 2019b. Southern Oregon Ready Mix Mt. Shasta site: Potential Occurrence of Wildlife Species. September 2019.

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S. Oregon Ready Mix - Siskiyou County, Summer

S. Oregon Ready Mix

Siskiyou County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	4.00	1000sqft	0.09	4,000.00	0
Other Asphalt Surfaces	1,080.00	1000sqft	24.79	1,080,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	85
Climate Zone	14			Operational Year	2021
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 - The County of Siskiyou receives power from Pacific Power. They are not included in this model so PacifiCorp was selected as a best fit.

Land Use - Other Asphalt Surfaces include the contractor's yard, wash out basin, septic field and well.

Construction Phase - The site does not have an existing structure so demo was removed. Building, paving and coating are assumed to happen at the same time.

Grading - Total acres being graded updated to 12.7 per information provided.

Energy Use -

Land Use Change -

Water Mitigation -

S. Oregon Ready Mix - Siskiyou County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	370.00	20.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	11/5/2020	5/30/2019
tblConstructionPhase	PhaseEndDate	9/10/2020	5/30/2019
tblConstructionPhase	PhaseEndDate	2/7/2019	1/10/2019
tblConstructionPhase	PhaseEndDate	4/11/2019	5/2/2019
tblConstructionPhase	PhaseEndDate	10/8/2020	5/30/2019
tblConstructionPhase	PhaseEndDate	2/21/2019	3/14/2019
tblConstructionPhase	PhaseStartDate	10/9/2020	5/3/2019
tblConstructionPhase	PhaseStartDate	4/12/2019	5/3/2019
tblConstructionPhase	PhaseStartDate	2/22/2019	3/15/2019
tblConstructionPhase	PhaseStartDate	9/11/2020	5/3/2019
tblConstructionPhase	PhaseStartDate	2/8/2019	3/1/2019
tblGrading	AcresOfGrading	87.50	12.70
tblGrading	MaterialImported	0.00	21,000.00

2.0 Emissions Summary

S. Oregon Ready Mix - Siskiyou County, Summer

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					
2019	55.1713	72.6138	73.0868	0.1620	18.2141	2.4810	20.6060	9.9699	2.3259	12.1705	0.0000	16,266.7257	16,266.7257	2.2078	0.0000	16,320.0213
Maximum	55.1713	72.6138	73.0868	0.1620	18.2141	2.4810	20.6060	9.9699	2.3259	12.1705	0.0000	16,266.7257	16,266.7257	2.2078	0.0000	16,320.0213

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					
2019	55.1713	72.6138	73.0868	0.1620	18.2141	2.4810	20.6060	9.9699	2.3259	12.1705	0.0000	16,266.7257	16,266.7257	2.2078	0.0000	16,320.0213
Maximum	55.1713	72.6138	73.0868	0.1620	18.2141	2.4810	20.6060	9.9699	2.3259	12.1705	0.0000	16,266.7257	16,266.7257	2.2078	0.0000	16,320.0213

[illegible]

S. Oregon Ready Mix - Siskiyou County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530
Energy	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523
Mobile	0.0894	0.7509	0.8913	3.2800e-003	0.1751	3.5500e-003	0.1786	0.0470	3.3500e-003	0.0503		335.0699	335.0699	0.0221		335.6231
Total	0.7994	0.7557	1.0056	3.3100e-003	0.1751	4.2400e-003	0.1793	0.0470	4.0400e-003	0.0510		339.8325	339.8325	0.0229	8.0000e-005	340.4283

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530
Energy	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523
Mobile	0.0894	0.7509	0.8913	3.2800e-003	0.1751	3.5500e-003	0.1786	0.0470	3.3500e-003	0.0503		335.0699	335.0699	0.0221		335.6231
Total	0.7994	0.7557	1.0056	3.3100e-003	0.1751	4.2400e-003	0.1793	0.0470	4.0400e-003	0.0510		339.8325	339.8325	0.0229	8.0000e-005	340.4283

S. Oregon Ready Mix - Siskiyou County, Summer

	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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/11/2019	1/10/2019	5	0	
2	Site Preparation	Site Preparation	3/1/2019	3/14/2019	5	10	
3	Grading	Grading	3/15/2019	5/2/2019	5	35	
4	Building Construction	Building Construction	5/3/2019	5/30/2019	5	20	
5	Paving	Paving	5/3/2019	5/30/2019	5	20	
6	Architectural Coating	Architectural Coating	5/3/2019	5/30/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12.7

Acres of Paving: 24.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 6,000; Non-Residential Outdoor: 2,000; Striped Parking Area: 64,800 (Architectural Coating – sqft)

OffRoad Equipment

S. Oregon Ready Mix - Siskiyou County, Summer

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

Trips and VMT

S. Oregon Ready Mix - Siskiyou County, Summer

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	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	2,076.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	455.00	178.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	91.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

[illegible]

S. Oregon Ready Mix - Siskiyou County, Summer

3.2 Demolition - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

S. Oregon Ready Mix - Siskiyou County, Summer

3.2 Demolition - 2019**Mitigated Construction Off-Site**

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

3.3 Site Preparation - 2019**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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298		3,766.4529	3,766.4529	1.1917		3,796.2445

S. Oregon Ready Mix - Siskiyou County, Summer

3.3 Site Preparation - 2019**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	0.1393	0.0964	1.0120	1.6900e-003	0.1479	1.5400e-003	0.1494	0.0392	1.4200e-003	0.0406		167.4235	167.4235	0.0105		167.6864
Total	0.1393	0.0964	1.0120	1.6900e-003	0.1479	1.5400e-003	0.1494	0.0392	1.4200e-003	0.0406		167.4235	167.4235	0.0105		167.6864

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

S. Oregon Ready Mix - Siskiyou County, Summer

3.3 Site Preparation - 2019**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	0.1393	0.0964	1.0120	1.6900e-003	0.1479	1.5400e-003	0.1494	0.0392	1.4200e-003	0.0406		167.4235	167.4235	0.0105		167.6864
Total	0.1393	0.0964	1.0120	1.6900e-003	0.1479	1.5400e-003	0.1494	0.0392	1.4200e-003	0.0406		167.4235	167.4235	0.0105		167.6864

3.4 Grading - 2019**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					6.4069	0.0000	6.4069	3.3518	0.0000	3.3518			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	4.7389	54.5202	33.3768	0.0620	6.4069	2.3827	8.7896	3.3518	2.1920	5.5438		6,140.0195	6,140.0195	1.9426		6,188.5854

S. Oregon Ready Mix - Siskiyou County, Summer

3.4 Grading - 2019**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	0.5611	17.9865	2.7095	0.0510	1.0398	0.0807	1.1205	0.2852	0.0772	0.3624		5,339.531 3	5,339.531 3	0.2534		5,345.867 4
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	0.1547	0.1071	1.1244	1.8800e-003	0.1643	1.7100e-003	0.1660	0.0436	1.5700e-003	0.0452		186.0261	186.0261	0.0117		186.3182
Total	0.7158	18.0936	3.8339	0.0528	1.2041	0.0824	1.2865	0.3288	0.0788	0.4076		5,525.557 4	5,525.557 4	0.2651		5,532.185 6

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					6.4069	0.0000	6.4069	3.3518	0.0000	3.3518			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.019 5	6,140.019 5	1.9426		6,188.585 4
Total	4.7389	54.5202	33.3768	0.0620	6.4069	2.3827	8.7896	3.3518	2.1920	5.5438	0.0000	6,140.019 5	6,140.019 5	1.9426		6,188.585 4

S. Oregon Ready Mix - Siskiyou County, Summer

3.4 Grading - 2019**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	0.5611	17.9865	2.7095	0.0510	1.0398	0.0807	1.1205	0.2852	0.0772	0.3624		5,339.531 3	5,339.531 3	0.2534		5,345.867 4
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	0.1547	0.1071	1.1244	1.8800e-003	0.1643	1.7100e-003	0.1660	0.0436	1.5700e-003	0.0452		186.0261	186.0261	0.0117		186.3182
Total	0.7158	18.0936	3.8339	0.0528	1.2041	0.0824	1.2865	0.3288	0.0788	0.4076		5,525.557 4	5,525.557 4	0.2651		5,532.185 6

3.5 Building Construction - 2019**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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5

S. Oregon Ready Mix - Siskiyou County, Summer

3.5 Building Construction - 2019**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	1.3233	24.6747	7.8767	0.0567	1.2069	0.1900	1.3968	0.3475	0.1817	0.5293		5,918.6618	5,918.6618	0.4350		5,929.5355
Worker	3.5200	2.4357	25.5807	0.0427	3.7377	0.0388	3.7765	0.9914	0.0358	1.0272		4,232.0947	4,232.0947	0.2658		4,238.7388
Total	4.8433	27.1104	33.4574	0.0994	4.9446	0.2288	5.1734	1.3390	0.2175	1.5565		10,150.7565	10,150.7565	0.7007		10,168.2743

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635

S. Oregon Ready Mix - Siskiyou County, Summer

3.5 Building Construction - 2019**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	1.3233	24.6747	7.8767	0.0567	1.2069	0.1900	1.3968	0.3475	0.1817	0.5293		5,918.6618	5,918.6618	0.4350		5,929.5355
Worker	3.5200	2.4357	25.5807	0.0427	3.7377	0.0388	3.7765	0.9914	0.0358	1.0272		4,232.0947	4,232.0947	0.2658		4,238.7388
Total	4.8433	27.1104	33.4574	0.0994	4.9446	0.2288	5.1734	1.3390	0.2175	1.5565		10,150.7565	10,150.7565	0.7007		10,168.2743

3.6 Paving - 2019**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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	3.2475					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	4.7019	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548

S. Oregon Ready Mix - Siskiyou County, Summer

3.6 Paving - 2019**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	0.1160	0.0803	0.8433	1.4100e-003	0.1232	1.2800e-003	0.1245	0.0327	1.1800e-003	0.0339		139.5196	139.5196	8.7600e-003		139.7386
Total	0.1160	0.0803	0.8433	1.4100e-003	0.1232	1.2800e-003	0.1245	0.0327	1.1800e-003	0.0339		139.5196	139.5196	8.7600e-003		139.7386

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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	3.2475					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	4.7019	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548

S. Oregon Ready Mix - Siskiyou County, Summer

3.6 Paving - 2019**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	0.1160	0.0803	0.8433	1.4100e-003	0.1232	1.2800e-003	0.1245	0.0327	1.1800e-003	0.0339		139.5196	139.5196	8.7600e-003		139.7386
Total	0.1160	0.0803	0.8433	1.4100e-003	0.1232	1.2800e-003	0.1245	0.0327	1.1800e-003	0.0339		139.5196	139.5196	8.7600e-003		139.7386

3.7 Architectural Coating - 2019**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	42.1785					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	42.4449	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

S. Oregon Ready Mix - Siskiyou County, Summer

3.7 Architectural Coating - 2019**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	0.7040	0.4871	5.1162	8.5300e-003	0.7475	7.7600e-003	0.7553	0.1983	7.1600e-003	0.2054		846.4189	846.4189	0.0532		847.7478
Total	0.7040	0.4871	5.1162	8.5300e-003	0.7475	7.7600e-003	0.7553	0.1983	7.1600e-003	0.2054		846.4189	846.4189	0.0532		847.7478

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	42.1785					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	42.4449	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

S. Oregon Ready Mix - Siskiyou County, Summer

3.7 Architectural Coating - 2019**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	0.7040	0.4871	5.1162	8.5300e-003	0.7475	7.7600e-003	0.7553	0.1983	7.1600e-003	0.2054		846.4189	846.4189	0.0532		847.7478
Total	0.7040	0.4871	5.1162	8.5300e-003	0.7475	7.7600e-003	0.7553	0.1983	7.1600e-003	0.2054		846.4189	846.4189	0.0532		847.7478

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

S. Oregon Ready Mix - Siskiyou County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0894	0.7509	0.8913	3.2800e-003	0.1751	3.5500e-003	0.1786	0.0470	3.3500e-003	0.0503		335.0699	335.0699	0.0221		335.6231
Unmitigated	0.0894	0.7509	0.8913	3.2800e-003	0.1751	3.5500e-003	0.1786	0.0470	3.3500e-003	0.0503		335.0699	335.0699	0.0221		335.6231

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	27.88	5.28	2.72	61,477	61,477
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	27.88	5.28	2.72	61,477	61,477

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.487361	0.038770	0.180029	0.116952	0.034202	0.006373	0.008681	0.117611	0.001222	0.001581	0.005079	0.001001	0.001137
Other Asphalt Surfaces	0.487361	0.038770	0.180029	0.116952	0.034202	0.006373	0.008681	0.117611	0.001222	0.001581	0.005079	0.001001	0.001137

S. Oregon Ready Mix - Siskiyou County, Summer

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523
NaturalGas Unmitigated	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523

S. Oregon Ready Mix - Siskiyou County, Summer

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					
General Light Industry	38.4658	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523

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					
General Light Industry	0.0384658	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523

6.0 Area Detail**6.1 Mitigation Measures Area**

S. Oregon Ready Mix - Siskiyou County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530
Unmitigated	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530

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	0.2311					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0104	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530
Total	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530

S. Oregon Ready Mix - Siskiyou County, Summer

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	0.2311					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0104	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530
Total	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

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
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S. Oregon Ready Mix - Siskiyou County, Summer

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

S. Oregon Ready Mix - Siskiyou County, Winter

S. Oregon Ready Mix

Siskiyou County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	4.00	1000sqft	0.09	4,000.00	0
Other Asphalt Surfaces	1,080.00	1000sqft	24.79	1,080,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	85
Climate Zone	14			Operational Year	2021
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 - The County of Siskiyou receives power from Pacific Power. They are not included in this model so PacifiCorp was selected as a best fit.

Land Use - Other Asphalt Surfaces include the contractor's yard, wash out basin, septic field and well.

Construction Phase - The site does not have an existing structure so demo was removed. Building, paving and coating are assumed to happen at the same time.

Grading - Total acres being graded updated to 12.7 per information provided.

Energy Use -

Land Use Change -

Water Mitigation -

S. Oregon Ready Mix - Siskiyou County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	370.00	20.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	11/5/2020	5/30/2019
tblConstructionPhase	PhaseEndDate	9/10/2020	5/30/2019
tblConstructionPhase	PhaseEndDate	2/7/2019	1/10/2019
tblConstructionPhase	PhaseEndDate	4/11/2019	5/2/2019
tblConstructionPhase	PhaseEndDate	10/8/2020	5/30/2019
tblConstructionPhase	PhaseEndDate	2/21/2019	3/14/2019
tblConstructionPhase	PhaseStartDate	10/9/2020	5/3/2019
tblConstructionPhase	PhaseStartDate	4/12/2019	5/3/2019
tblConstructionPhase	PhaseStartDate	2/22/2019	3/15/2019
tblConstructionPhase	PhaseStartDate	9/11/2020	5/3/2019
tblConstructionPhase	PhaseStartDate	2/8/2019	3/1/2019
tblGrading	AcresOfGrading	87.50	12.70
tblGrading	MaterialImported	0.00	21,000.00

2.0 Emissions Summary

S. Oregon Ready Mix - Siskiyou County, Winter

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					
2019	55.9769	73.2146	79.4433	0.1572	18.2141	2.4855	20.6060	9.9699	2.3302	12.1705	0.0000	15,768.35 24	15,768.35 24	2.2434	0.0000	15,823.31 67
Maximum	55.9769	73.2146	79.4433	0.1572	18.2141	2.4855	20.6060	9.9699	2.3302	12.1705	0.0000	15,768.35 24	15,768.35 24	2.2434	0.0000	15,823.31 67

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					
2019	55.9769	73.2146	79.4433	0.1572	18.2141	2.4855	20.6060	9.9699	2.3302	12.1705	0.0000	15,768.35 24	15,768.35 24	2.2434	0.0000	15,823.31 67
Maximum	55.9769	73.2146	79.4433	0.1572	18.2141	2.4855	20.6060	9.9699	2.3302	12.1705	0.0000	15,768.35 24	15,768.35 24	2.2434	0.0000	15,823.31 67

[illegible]

S. Oregon Ready Mix - Siskiyou County, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530
Energy	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523
Mobile	0.0884	0.7902	1.0362	3.1200e-003	0.1751	3.6500e-003	0.1787	0.0470	3.4500e-003	0.0504		318.4890	318.4890	0.0242		319.0947
Total	0.7985	0.7950	1.1505	3.1500e-003	0.1751	4.3400e-003	0.1794	0.0470	4.1400e-003	0.0511		323.2516	323.2516	0.0250	8.0000e-005	323.9000

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530
Energy	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523
Mobile	0.0884	0.7902	1.0362	3.1200e-003	0.1751	3.6500e-003	0.1787	0.0470	3.4500e-003	0.0504		318.4890	318.4890	0.0242		319.0947
Total	0.7985	0.7950	1.1505	3.1500e-003	0.1751	4.3400e-003	0.1794	0.0470	4.1400e-003	0.0511		323.2516	323.2516	0.0250	8.0000e-005	323.9000

S. Oregon Ready Mix - Siskiyou County, Winter

	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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/11/2019	1/10/2019	5	0	
2	Site Preparation	Site Preparation	3/1/2019	3/14/2019	5	10	
3	Grading	Grading	3/15/2019	5/2/2019	5	35	
4	Building Construction	Building Construction	5/3/2019	5/30/2019	5	20	
5	Paving	Paving	5/3/2019	5/30/2019	5	20	
6	Architectural Coating	Architectural Coating	5/3/2019	5/30/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12.7

Acres of Paving: 24.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 6,000; Non-Residential Outdoor: 2,000; Striped Parking Area: 64,800 (Architectural Coating – sqft)

OffRoad Equipment

S. Oregon Ready Mix - Siskiyou County, Winter

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

Trips and VMT

S. Oregon Ready Mix - Siskiyou County, Winter

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	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	2,076.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	455.00	178.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	91.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

[illegible]

S. Oregon Ready Mix - Siskiyou County, Winter

3.2 Demolition - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

S. Oregon Ready Mix - Siskiyou County, Winter

3.2 Demolition - 2019**Mitigated Construction Off-Site**

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

3.3 Site Preparation - 2019**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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298		3,766.4529	3,766.4529	1.1917		3,796.2445

S. Oregon Ready Mix - Siskiyou County, Winter

3.3 Site Preparation - 2019**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	0.1612	0.1381	1.1473	1.6100e-003	0.1479	1.5400e-003	0.1494	0.0392	1.4200e-003	0.0406		159.0064	159.0064	0.0108		159.2774
Total	0.1612	0.1381	1.1473	1.6100e-003	0.1479	1.5400e-003	0.1494	0.0392	1.4200e-003	0.0406		159.0064	159.0064	0.0108		159.2774

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

S. Oregon Ready Mix - Siskiyou County, Winter

3.3 Site Preparation - 2019**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	0.1612	0.1381	1.1473	1.6100e-003	0.1479	1.5400e-003	0.1494	0.0392	1.4200e-003	0.0406		159.0064	159.0064	0.0108		159.2774
Total	0.1612	0.1381	1.1473	1.6100e-003	0.1479	1.5400e-003	0.1494	0.0392	1.4200e-003	0.0406		159.0064	159.0064	0.0108		159.2774

3.4 Grading - 2019**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					6.4069	0.0000	6.4069	3.3518	0.0000	3.3518			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	4.7389	54.5202	33.3768	0.0620	6.4069	2.3827	8.7896	3.3518	2.1920	5.5438		6,140.0195	6,140.0195	1.9426		6,188.5854

S. Oregon Ready Mix - Siskiyou County, Winter

3.4 Grading - 2019**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	0.5881	18.5409	3.2308	0.0495	1.0398	0.0831	1.1229	0.2852	0.0795	0.3647		5,184.447 0	5,184.447 0	0.2887		5,191.664 9
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	0.1791	0.1535	1.2747	1.7800e-003	0.1643	1.7100e-003	0.1660	0.0436	1.5700e-003	0.0452		176.6737	176.6737	0.0121		176.9749
Total	0.7672	18.6944	4.5055	0.0513	1.2041	0.0848	1.2889	0.3288	0.0811	0.4099		5,361.120 7	5,361.120 7	0.3008		5,368.639 8

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					6.4069	0.0000	6.4069	3.3518	0.0000	3.3518			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.019 5	6,140.019 5	1.9426		6,188.585 4
Total	4.7389	54.5202	33.3768	0.0620	6.4069	2.3827	8.7896	3.3518	2.1920	5.5438	0.0000	6,140.019 5	6,140.019 5	1.9426		6,188.585 4

S. Oregon Ready Mix - Siskiyou County, Winter

3.4 Grading - 2019**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	0.5881	18.5409	3.2308	0.0495	1.0398	0.0831	1.1229	0.2852	0.0795	0.3647		5,184.447 0	5,184.447 0	0.2887		5,191.664 9
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	0.1791	0.1535	1.2747	1.7800e-003	0.1643	1.7100e-003	0.1660	0.0436	1.5700e-003	0.0452		176.6737	176.6737	0.0121		176.9749
Total	0.7672	18.6944	4.5055	0.0513	1.2041	0.0848	1.2889	0.3288	0.0811	0.4099		5,361.120 7	5,361.120 7	0.3008		5,368.639 8

3.5 Building Construction - 2019**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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5

S. Oregon Ready Mix - Siskiyou County, Winter

3.5 Building Construction - 2019**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	1.4454	25.2991	10.0168	0.0545	1.2069	0.1944	1.4013	0.3475	0.1860	0.5335		5,682.623 5	5,682.623 5	0.4914		5,694.909 6
Worker	4.0743	3.4919	29.0004	0.0406	3.7377	0.0388	3.7765	0.9914	0.0358	1.0272		4,019.327 4	4,019.327 4	0.2741		4,026.179 4
Total	5.5197	28.7910	39.0172	0.0951	4.9446	0.2332	5.1778	1.3390	0.2218	1.5607		9,701.950 9	9,701.950 9	0.7655		9,721.089 0

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5

S. Oregon Ready Mix - Siskiyou County, Winter

3.5 Building Construction - 2019**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	1.4454	25.2991	10.0168	0.0545	1.2069	0.1944	1.4013	0.3475	0.1860	0.5335		5,682.623 5	5,682.623 5	0.4914		5,694.909 6
Worker	4.0743	3.4919	29.0004	0.0406	3.7377	0.0388	3.7765	0.9914	0.0358	1.0272		4,019.327 4	4,019.327 4	0.2741		4,026.179 4
Total	5.5197	28.7910	39.0172	0.0951	4.9446	0.2332	5.1778	1.3390	0.2218	1.5607		9,701.950 9	9,701.950 9	0.7655		9,721.089 0

3.6 Paving - 2019**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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.002 5	2,257.002 5	0.7141		2,274.854 8
Paving	3.2475					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	4.7019	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.002 5	2,257.002 5	0.7141		2,274.854 8

S. Oregon Ready Mix - Siskiyou County, Winter

3.6 Paving - 2019**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	0.1343	0.1151	0.9561	1.3400e-003	0.1232	1.2800e-003	0.1245	0.0327	1.1800e-003	0.0339		132.5053	132.5053	9.0400e-003		132.7312
Total	0.1343	0.1151	0.9561	1.3400e-003	0.1232	1.2800e-003	0.1245	0.0327	1.1800e-003	0.0339		132.5053	132.5053	9.0400e-003		132.7312

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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	3.2475					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	4.7019	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548

S. Oregon Ready Mix - Siskiyou County, Winter

3.6 Paving - 2019**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	0.1343	0.1151	0.9561	1.3400e-003	0.1232	1.2800e-003	0.1245	0.0327	1.1800e-003	0.0339		132.5053	132.5053	9.0400e-003		132.7312
Total	0.1343	0.1151	0.9561	1.3400e-003	0.1232	1.2800e-003	0.1245	0.0327	1.1800e-003	0.0339		132.5053	132.5053	9.0400e-003		132.7312

3.7 Architectural Coating - 2019**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	42.1785					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	42.4449	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

S. Oregon Ready Mix - Siskiyou County, Winter

3.7 Architectural Coating - 2019**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	0.8149	0.6984	5.8001	8.1200e-003	0.7475	7.7600e-003	0.7553	0.1983	7.1600e-003	0.2054		803.8655	803.8655	0.0548		805.2359
Total	0.8149	0.6984	5.8001	8.1200e-003	0.7475	7.7600e-003	0.7553	0.1983	7.1600e-003	0.2054		803.8655	803.8655	0.0548		805.2359

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	42.1785					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	42.4449	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

S. Oregon Ready Mix - Siskiyou County, Winter

3.7 Architectural Coating - 2019**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	0.8149	0.6984	5.8001	8.1200e-003	0.7475	7.7600e-003	0.7553	0.1983	7.1600e-003	0.2054		803.8655	803.8655	0.0548		805.2359
Total	0.8149	0.6984	5.8001	8.1200e-003	0.7475	7.7600e-003	0.7553	0.1983	7.1600e-003	0.2054		803.8655	803.8655	0.0548		805.2359

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

S. Oregon Ready Mix - Siskiyou County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0884	0.7902	1.0362	3.1200e-003	0.1751	3.6500e-003	0.1787	0.0470	3.4500e-003	0.0504		318.4890	318.4890	0.0242		319.0947
Unmitigated	0.0884	0.7902	1.0362	3.1200e-003	0.1751	3.6500e-003	0.1787	0.0470	3.4500e-003	0.0504		318.4890	318.4890	0.0242		319.0947

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	27.88	5.28	2.72	61,477	61,477
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	27.88	5.28	2.72	61,477	61,477

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.487361	0.038770	0.180029	0.116952	0.034202	0.006373	0.008681	0.117611	0.001222	0.001581	0.005079	0.001001	0.001137
Other Asphalt Surfaces	0.487361	0.038770	0.180029	0.116952	0.034202	0.006373	0.008681	0.117611	0.001222	0.001581	0.005079	0.001001	0.001137

S. Oregon Ready Mix - Siskiyou County, Winter

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523
NaturalGas Unmitigated	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523

S. Oregon Ready Mix - Siskiyou County, Winter

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					
General Light Industry	38.4658	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523

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					
General Light Industry	0.0384658	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		4.5254	4.5254	9.0000e-005	8.0000e-005	4.5523

6.0 Area Detail**6.1 Mitigation Measures Area**

S. Oregon Ready Mix - Siskiyou County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530
Unmitigated	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530

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	0.2311					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0104	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530
Total	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530

S. Oregon Ready Mix - Siskiyou County, Winter

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	0.2311					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0104	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530
Total	0.7096	1.0200e-003	0.1111	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2372	0.2372	6.3000e-004		0.2530

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

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
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S. Oregon Ready Mix - Siskiyou County, Winter

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Wildland Resource Managers follow up Botany Survey Report for: Southern Oregon Ready Mix: Mt. Shasta Site

July 18, 2019

Introduction:

Wildland Resource Managers was requested by Southern Oregon Ready Mix LLC. to conduct a rare plant survey on a 34-acre project site located in central Siskiyou County, California. The site is located just north of the city of Mt. Shasta, directly east of Interstate 5 (see Vicinity Map dated 12/19/18). A sensitive plant list was developed from a search of the California Natural Diversity Data Base for the area to be surveyed. Those listed species for the areas included:

Common name	Scientific name	Ranking
Pallid birds-beak	<i>Cordylanthus tenuis pallescens</i>	1B.2
Trinity buckwheat	<i>Erigonum alpinum</i>	1B.2
Siskiyou clover	<i>Trifolium siskiyouense</i>	1B.1
Jepson's dodder	<i>Cuscuta jepsonii</i>	1B.2
Oregon fireweed	<i>Eplibium oreganum</i>	1B.2
Woolly balsamroot	<i>Balsamorhiza lanata</i>	1B.1
Thread-leaved bardtongue	<i>Penstemon filiformis</i>	1B.3
Gasquet rose	<i>Rosa gymnocarpa</i>	1B.3
Shasta chaenactis	<i>Chaenactis suffrutescens</i>	1B.3
Northern adder's tongue	<i>Ophioglossum pusillum</i>	2B.2
Aleppo avens	<i>Geum aleppicum</i>	2B.2
Baker's globe mallow	<i>Iliamna bakeri</i>	4.4
Pacific fuzzwort	<i>Ptilidium californicum</i>	4.3

Methods:

The first step of the survey was the development of a field guide listing each species that could be present within that area. The guide included colored pictures of the species, blooming period and a description of associated habitat. It was noted that the blooming period for the listed species ranged annually from May to September but that all species were blooming either in June or July. Therefore, June and July surveys were conducted at the site.

The first survey was done by two WRM staff on June 5, 2019 with the weather overcast and light wind. The second survey was done by one WRM staff on July 15, 2019 with the weather clear and calm.

For each survey, the surveyors attempted to walk a grid pattern across the entire site acreage. This proved to be difficult as a dense shrub field dominated by manzanita with lesser amounts of other species formed a nearly impenetrable barrier to accessing the interior of the site. Where present, game trails were used to access the interior areas. Due to this shrub field, most of the survey effort focused on the edges of the cleared areas where access was available.

Results:

Vegetation on this site may be characterized as manzanita-shrub with green leaf manzanita (*Arctostaphylos patula*) dominating the species composition. The shrub canopy cover exceeds 95% with the manzanita comprising 85 + percent of that total. Interspersed with the manzanita is bitterbrush (*Purshia tridentata*) which makes up about 10%. Underneath the shrub layer squaw carpet (*Ceanothus prostratus*) is found along with scattered grasses and forbs being present where sunlight can penetrate to the surface soils. Rabbit brush (*Chrysothamnus spp.*) is found along the edges of shrub field. Generally, the shrub field averages 4-5 feet in height and is extremely compacted and difficult to penetrate. The shrub layer may be characterized as mature to declining as decadency comprises nearly 50% of the shrub volume.

There are several species of trees on the parcel found generally as open grown singular trees or in small clusters, these being primarily in the southwest side of the area. These tree species include sugar pine (*Pinus lambertiana*), incense cedar (*Calocedrus decurrens*), interior live oak (*Quercus wislizeni*), Douglas fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*) and ponderosa pine (*Pinus ponderosa*).

The growth patterns of the shrubs and stature of the trees evidence a recent fire through the area. This is further evidenced by a few scattered burned out snags.

During the course of the two surveys none of the sensitive plant species listed for the area were found to be present on site.

For questions regarding this report, please contact:

Steven J. Kerns, Certified Wildlife Biologist

Wildland Resource Managers

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Southern Oregon Ready Mix Mt. Shasta site: Potential Occurrence of Wildlife Species

Prepared by: Wildland Resource Managers September 2019

Introduction

In January 2019 Wildland Resource Managers (WRM) prepared a biological review (BR) report for Southern Oregon Ready Mix's Mt. Shasta project site, located on Spring Hill Drive just north of the City of Mt. Shasta; assessor's parcel numbers 021-071-320 and 021-071-330. As a part of the BR, WRM conducted a search of the California Natural Diversity Data Base to determine which listed species could possibly be present on the site and then analyzed that possibly given the habitat conditions; see attached. The analysis determined that only three listed wildlife species could be utilizing the site: the golden eagle, yellow-breasted chat and possibly, though unlikely, three species of bats. During visits to the project area in the winter of 2018 and the spring and summer of 2019, these species were looked for. This report describes the field investigation efforts made to determine if those, or any other listed animal species, are present on the project area.

Methods

The project area was visited on December 4th and 10th of 2018 and June 5th, July 15th and September 17th of 2019. The surveys of 2018 and June of 2019 were conducted by two WRM staff biologists who walked accessible areas at the project area, focusing on identifying plant species but also noting the presence of wildlife. The surveys of June and September 2019 were conducted by one WRM biologist and focused observations on both plant and animal species. With the exception of the September survey, all surveys were conducted during mid-day hours and averaging three hours apiece. The September survey was conducted between 1700 and 1930 hours in order to determine if any bat species might be utilizing the site. This was done by watching the sky above the site from a location near the center of the project area.

Results

No eagles, yellow-breasted chats or bats were observed at the site during any of the surveys. Deer (tracks and pellet groups), ground squirrels, ravens, crows, scrub jays, rufous sided towhee (visual sightings) and gophers (mounds) were the extent of the wildlife species evidenced.

For further information regarding this report, please contact:

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Reference cited

California Natural Diversity Data Base, Query of City of Mt. Shasta Quadrangle. 2019. California Department of Fish and Wildlife online data base.

Wildland Resource Managers. 2019. Biological Review: Southern Oregon Ready Mix LLC, Mt. Shasta, California. Report prepared for Southern Oregon Ready Mix LLC.

Wildland Resource Managers. 2019. Follow-up Botany Survey Report for: Southern Oregon Ready Mix: Mt Shasta Site. Report prepared for Southern Oregon Ready Mix LLC.

Results of California Natural Diversity Data Base, Query of City of Mt. Shasta Quadrangle follow this page.

Common Name	Scientific Name	Status *	General Habitat Description	Potential to Occur in Project Area
Wildlife				
Golden Eagle	<i>Aquila chrysaetos</i>	SFP, SWL	Favor partially or completely open country, especially around mountains, hills and cliffs.	The project area may contain suitable hunting habitat for the golden eagle.
Bald eagle	<i>Haliaeetus leucocephalus</i>	FD, SFP, SE	Coasts, rivers, large lakes; in migration, also mountains, open country. Typically close to water, also locally in open dry country.	The project area is unlikely to have suitable hunting habitat for the bald eagle.
Osprey	<i>Pandion haliaetus</i>	SWL	Rivers, lakes, coast. Found near water, either fresh or salt, where large numbers of fish are present. May be most common around major coastal estuaries and salt marshes, but also regular around large lakes, reservoirs, rivers.	The lack of a permanent water source within the project area makes it unlikely that an osprey would be found.
Black Swift	<i>Cypseloides niger</i>	SSSC	Nests on cliffs and behind waterfalls. Feeds over forests and open areas.	There is no suitable habitat for this species within the project area.
Bank swallow	<i>Riparia riparia</i>	ST	Bank Swallows live in low areas along rivers, streams, ocean coasts, or reservoirs. Their territories usually include vertical cliffs or banks where they nest in colonies of 10 to 2,000 nests.	There is no suitable habitat for the bank swallow within the project area.
Willow flycatcher	<i>Empidonax trillii</i>	SE	Occupy areas with willows or other shrubs near standing or running water.	There is no suitable habitat for the willow flycatcher within the project area.
Prarie falcon	<i>Falco mexicanus</i>	SWL	They occur in wide-open habitats of the West, including sagebrush, desert, prairie, agricultural fields, and alpine meadows up to 3500m elevation. They nest on ledges on sheer rocky cliffs.	There is no suitable nesting habitat within the project area. There may be suitable hunting habitat within the project area.
American peregrine falcon	<i>Falco peregrinus anatum</i>	FD, SD, SFP	Typically perch or nest on skyscrapers, water towers, cliffs, power poles and other tall structures.	There is no suitable habitat within the project area.
Yellow-breasted chat	<i>Icteria virens</i>	SSSC	Yellow-breasted Chats live in thickets and other dense, regrowing areas such as bramble bushes, clearcuts, powerline corridors, and shrubs along streams.	Due to the abundance of shrubs, there may be suitable habitat for this species. However, due to the lack of a permanent water source and the project area's proximity to both Interstate-5 and Black Butte transfer station, finding this species is unlikely.
Sierra Nevada red fox	<i>Vulpes vulpes necator</i>	FC, ST	Red fir and lodgepole pine forests in the subalpine zone and alpine fell-fields of the Sierra Nevada. Open areas are used for hunting, forested habitats for cover and reproduction.	The Sierra Nevada red fox is unlikely to be found within the project area.
California Wolverine	<i>Gulo gulo</i>	FP, ST, SFP	Rugged, remote country, spending most of their time in high elevations near or above timberline.	There is no suitable habitat for this species within the project area.
Fisher- West Coast DPS	<i>Pekania pennanti</i>	ST, SSSC	Spend most of their time on the forest floor and prefer continuous coniferous forest to other habitats.	With the lack of canopy cover, the project area does not have suitable habitat for the west coast fisher.

Western mastiff bat	<i>Eumops perotis californicus</i>	SSSC	Most frequently encountered in broad open areas. Generally found in a variety of habitats, from dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, montane meadows, and agricultural areas. Primarily a cliff-dwelling species.	The lack of rock outcroppings and cliffs make it unlikely that this species would be found within the project area.
Pallid bat	<i>Antrozous pallidus</i>	SSSC	They roost in a variety of places but favor rocky outcrops.	<i>See Potential to Occur for Western mastiff bat.</i>
Spotted bat	<i>Euderma maculatum</i>	SSSC	Spotted Bats roost in the small cracks found in cliffs and stony outcrops.	<i>See Potential to Occur for Western mastiff bat.</i>

Plants

Cylindrical trichodon	<i>Trichodon cylindricus</i>	2B.2	Acidic habitats, and is often abundant in stubble fields. It also grows in sand pits and gravel pits, on the banks of streams and rivers, disturbed roadsides, and sometimes on seasonally flooded ground at the edge of lakes and reservoirs.	There is suitable habitat within the project area for this species of moss.
Siskiyou onion	<i>Allium siskiyouense</i>	4.3	Grows within serpentine and rocky soils from 300-2700 m	There is suitable habitat within the project area to support this species.
Alpine Bittercress (fleshy toothwort)	<i>Cardamine bellidifolia</i> var. <i>pachyphylla</i>	4.3	Inhabits cliffs, ravines and wet shelves in the alpine zone.	There is no suitable habitat within the project area.
Mt. Shasta arnica	<i>Arnica viscosa</i>	4.3	Open, rocky, subalpine to alpine sites from 2000-2500 m	There is suitable habitat to support this species however, Mt. Shasta arnica typically grows at higher elevations.
Wooly balsamroot	<i>Balsamorhiza lanata</i>	1B.2	Open woodland, grassy slopes within foothill woodland communities.	There is no suitable habitat within the project area to support this species.
Silky balsamroot	<i>Balsamorhiza sericea</i>	1B.3	Serpentine outcrops, rocky slopes. 400-1800 m	There is sufficient habitat within the project area to support this species.
Baker's globe mallow	<i>Iliamna bakeri</i>	4.2	Grows in mountain forests and woodlands on volcanic soils.	There is sufficient habitat for Baker's globe mallow within the project area.
Shasta chaenactis	<i>Chaenactis suffrutescens</i>	1B.3	Unstable, sandy to rocky, generally serpentine soils, scree, drainages. 700-2300 m	There is sufficient habitat within the project area to support this species.
Shasta beardtongue	<i>Penstemon heterodoxus</i> var. <i>shastensis</i>	4.3	Occurs in meadows within the communities of red fir forest and yellow-pine forest.	There is no suitable habitat for this species within the project area.
Waldo daisy	<i>Erigeron bloomeri</i> var. <i>nudatus</i>	2B.3	Serpentine slopes and rocky ridges within lodgepole forest, red fir forest and yellow pine forest communities.	There is no sufficient habitat within the project area to support this species.

Little hulsea	<i>Hulsea nana</i>	2B.3	Grows in the talus of volcanic mountains and plateaus. 1524-4300 m.	There is sufficient habitat within the project area to support this species.
Snow fleabane daisy	<i>Erigeron nivalis</i>	2B.3	Volcanic rocks and meadows within subalpine forest communities. 2700-2900 m	This species typically grows at elevations higher than the elevational range within the project area.
Klamath Rock daisy	<i>Erigeron petrophilus</i> var. <i>viscidulus</i>	4.3	Rocky foothills to montane forest, sometimes within serpentine soils. 1500-2700 m	There is no suitable habitat within the project area to support this species.
Subalpine aster	<i>Eurybia merita</i>	2B.3	Open, mesic or dry, rocky areas and woods, clearings, burnt areas, creek banks (rocky, sandy, or gravelly), 1300-2000 m	There is sufficient habitat within the project area to support this species.
Alkali hymenoxys	<i>Hymenoxys lemmonii</i>	2B.3	Roadsides, open areas, meadows, slopes, drainage areas, stream banks. 800-3200 m	There is no suitable habitat within the project area to support this species.
Golden alpine draba	<i>Draba aureola</i>	1B.3	Scree, talus, generally volcanic substrates, alpine meadows, open conifer forests. 2250-3200 m	This species typically grows at elevations higher than the elevational range within the project area.
Mt. Eddy draba	<i>Draba carnosula</i>	1B.3	Rocky slopes and open rocky areas. 2000-2700 m	This species typically grows at elevations higher than the elevational range within the project area.
Howell's draba	<i>Draba howellii</i>	4.3	See Mt. Eddy draba	
Short-podded thelypodium	<i>Thelypodium brachycarpum</i>	4.2	Alkaline soils, adobe flats and pond margins. 800-2330 m	There is no suitable habitat within the project area to support this species.
Rough harebell	<i>Campanula scabrella</i>	4.3	Bare talus slopes in alpine fell-field communities. 2100-2800 m	This species typically grows at elevations higher than the elevational range within the project area.
Castle Crag harebell	<i>Campanula shetleri</i>	1B.3	Rock crevices within yellow pine forests. 1300-1500 m	There is sufficient habitat within the project area to support this species.
Cascade alpine campion	<i>Silene suksdorfii</i>	2B.3	Rocky slopes, alpine fell-field communities. 2400-3100 m	This species typically grows at elevations higher than the elevational range within the project area.
Jepson's dodder	<i>Cuscuta jepsonii</i>	1B.2	This species of vine grows on <i>Ceanothus diversifolius</i> and <i>Ceanothus prostratus</i> . 1200-2300 m	This species could have the potential to occur given that the host species are present within the project area.
Northern holly fern	<i>Polystichum lonchitis</i>	3	Generally shaded, moist or wet, granite or limestone crevices or bluffs.	There is no suitable habitat for this species.
Klamath manzanita	<i>Arctostaphylos klamathensis</i>	1B.2	Rocky outcrops, slopes, subalpine forest. 1600-2000 m	This species typically grows at elevations higher than the elevational range within the project area.
Little-leaved huckleberry	<i>Vaccinium scoparium</i>	2B.2	Rocky subalpine woodland. 1800-2200 m	This species typically grows at elevations higher than the elevational range within the project area.

Slender false lupine	<i>Thermopsis gracilis</i>	4.3	Open sites generally with mixed-evergreen forest. Communities include foothill woodland, yellow pine forest and North Coast coniferous forest.	There is no suitable habitat within the project area to support this species.
Siskiyou phacelia	<i>Phacelia leonis</i>	1B.3	Sandy flats, slopes, conifer forests. 1200-2750 m	There is no suitable habitat within the project area to support this species.
Redwood lily	<i>Lilium rubescens</i>	4.2	Dry soils in chaparral, gaps in conifer forests. 30-1800 m	There is sufficient habitat within the project area to support this species.
Purple-flowered Washington lily	<i>Lilium washingtonianum</i> ssp. <i>purpurascens</i>	4.3	Forest openings, roadsides, chaparral or burned clearcuts in Oregon and down into California.	There is sufficient habitat within the project area to support this species.
Redding checkerbloom	<i>Sidalcea celata</i>	3	Open oak woodland. 150-370 m	There is no oak woodland community within the project area. This species is unlikely to be found.
Hutchison's lewisia	<i>Lewisia kelloggii</i> ssp. <i>hutchisonii</i>	3.2	Decomposed granite, slate, volcanic rubble, conifer forest. 1800-2135 m	This species typically grows at higher elevations than the elevational range within the project area.
Northern clarkia	<i>Clarkia borealis</i> ssp. <i>borealis</i>	1B.3	Foothill woodland, forest margin. 400-800 m	There is no foothill woodland community within the project area. This species is unlikely to be found.
Humboldt County fuchsia	<i>Epilobium septentrionale</i>	4. 3	Dry, sandy or rocky ledges. 20-1900 m	There is sufficient habitat within the project area to support this species.
Siskiyou fireweed	<i>Epilobium siskiyouense</i>	1B.3	Scree, moist ledges, typically serpentine ridges. 1700-2500 m	This species typically grows at higher elevations than the elevational range within the project area.
Northwestern moonwort	<i>Botrychium pinnatum</i>	2B.2	Moist fields and shrubby slopes. 1900-2800 m	This species typically grows at elevations higher than the elevational range within the project area.
Pumice moonwort	<i>Botrychium pumicola</i>	2B.2	Open volcanic soil. 2700-2800 m	This species typically grows at elevations higher than the elevational range within the project area.
Mountain lady's-slipper	<i>Cypripedium montanum</i>	4.2	Moist areas, dry slopes, mixed-evergreen or conifer forest.	The lack of mature timber and wetlands make it unlikely for this species to be found within the project area.
Split-hair paintbrush	<i>Castilleja schizotricha</i>	4.3	Decomposed granite or marble. 1500-2300 m	The elevational range minimum for this species is on the margin of the project area's highest point. The project area may provide suitable habitat for this species.
Pallid bird's-beak	<i>Cordylanthus tenuis</i> ssp. <i>pallascens</i>	1B.2	Open volcanic alluvium. 900-1200 m	Multiple samples of this species have been located just outside of the project area boundary. There is suitable habitat to support this species within the project area.
Shasta orthocarpus	<i>Orthocarpus pachystachyus</i>	1B.1	Openings in sagebrush scrub. <1000 m	This species is typically found at lower elevations than the elevational range within the project area.

Shasta limestone monkeyflower	<i>Erythranthe taylorii</i>	1B.1	Crevices in limestone cliffs and outcrops. 900-1000 m	There is no suitable habitat due to the volcanic composition of the rock within the project area.
Thread-leaved beardtongue	<i>Penstemon filiformis</i>	1B.3	Open, rocky places among shrubs within yellow-pine communities. 400-1700 m	There is sufficient habitat for this species within the project area.
Copeland's speedwell	<i>Veronica copelandii</i>	4.3	Subalpine meadows and slopes. <2600 m	There is no suitable habitat within the project area to support this species.
Tracy's collomia	<i>Collomia tracyi</i>	4.3	Rocky, gravelly, or sandy areas. 30-2100 m	There is sufficient habitat within the project area to support this species.
Mt. Eddy sky pilot	<i>Polemonium eddyense</i>	1B.2	Serpentine soils. 2649-2750 m	This species typically grows at higher elevations than the elevational range within the project area.
Mt. Shasta sky pilot	<i>Polemonium pulcherrimum</i> var. <i>shastense</i>	1B.2	Volcanic talus. 2590-3170 m	This species typically grows at higher elevations than the elevational range within the project area.
Trinity buckwheat	<i>Eriogonum alpinum</i>	1B.2	Serpentine soils and rocky areas. 2000-2800 m	This species typically grows at higher elevations than the elevational range within the project area.
Congdon's buckwheat	<i>Eriogonum congdonii</i>	4.3	Serpentine soils and rocky areas. 1500-2300 m	This species is unlikely to be found within the project area. A large population of Congdon's buckwheat grows to the west of the property area, near Mt. Eddy.
Pyrola-leaved buckwheat	<i>Eriogonum pyrolifolium</i> var. <i>pyrolifolium</i>	2B.3	Sandy areas and rock outcrops. 800-3300 m	There is sufficient habitat within the project area to support this species.
Siskiyou buckwheat	<i>Eriogonum siskiyouense</i>	4.3	Serpentine soils and rocky areas. 1600-2800 m	There is no suitable habitat within the project area. The project area lacks the elevation and soil type required to support this species.
Greene's buckwheat	<i>Eriogonum strictum</i> var. <i>greenei</i>	4.3	See <i>Siskiyou buckwheat</i>	
Ternate buckwheat	<i>Eriogonum ternatum</i>	4.3	See <i>Siskiyou buckwheat</i>	
Mt. Eddy buckwheat	<i>Eriogonum umbellatum</i> var. <i>humistratum</i>	4.3	See <i>Siskiyou buckwheat</i>	
Castle Crag ivesia	<i>Ivesia longibracteata</i>	1B.3	Granite crevices. 1200-1400 m	There is no suitable habitat within the project area to support this species.

Crested potentilla	<i>Potentilla cristae</i>	1B.3	Seasonally moist, serpentine-like gravels, talus. 1800-2800 m	This species typically grows at elevations higher than the elevational range within the project area.
Gasquet rose	<i>Rosa gymnocarpa</i> var. <i>serpentina</i>	1B.3	Full sun in chaparral, ultramafic substrates. 400-1500 m	There is sufficient habitat within the project area to support this species.
Scott Mountain bedstraw	<i>Galium serpticum</i> ssp. <i>scotticum</i>	1B.2	Steep slopes in open pine forest. 1000-2000 m	There is sufficient habitat within the project area to support this species.
Yellow triteleia	<i>Triteleia crocea</i> var. <i>crocea</i>	4.3	Dry slopes within yellow pine forest communities. 640-2100 m	There is sufficient habitat within the project area to support this species.
Trinity Mountains triteleia	<i>Triteleia crocea</i> var. <i>modesta</i>	4.3	Open conifer forest, dry slopes. 650-2220 m	There is sufficient habitat within the project area to support this species.
Henderson's triteleia	<i>Triteleia hendersonii</i>	2B.2	Dry slopes within foothill woodland communities. 100-3000 m	There is no foothill woodland community within the project area. This species is unlikely to be found.

*** Status Code**

Federal

FE	Federally Listed- Endangered
FT	Federally Listed- Threatened
FC	Federal Candidate Species
FP	Federal Proposed Species
FD	Federally Delisted

State:

SFP	State Fully Protected
SE	State Listed- Endangered
ST	State Listed- Threatened
SC	State Candidate Species
SCCC	State Species of Special Concern
SWL	State Watch List
SD	State Delisted

Rare Plant Rank

1B	Rare, threatened, or endangered in California and elsewhere
2B	Rare, threatened, or endangered in California but more common elsewhere
3	Plants for which more information is needed
4	Plants of limited distribution-Watch list

Rare Plant Threat Rank

- 0.1 Seriously threatened in California
- 0.2 Moderately threatened in California

S. Oregon Ready Mix - Siskiyou County, Annual

S. Oregon Ready Mix

Siskiyou County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	4.00	1000sqft	0.09	4,000.00	0
Other Asphalt Surfaces	1,080.00	1000sqft	24.79	1,080,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	85
Climate Zone	14			Operational Year	2021
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 - The County of Siskiyou receives power from Pacific Power. They are not included in this model so PacifiCorp was selected as a best fit.

Land Use - Other Asphalt Surfaces include the contractor's yard, wash out basin, septic field and well.

Construction Phase - The site does not have an existing structure so demo was removed. Building, paving and coating are assumed to happen at the same time.

Grading - Total acres being graded updated to 12.7 per information provided.

Energy Use -

Land Use Change -

Water Mitigation -

S. Oregon Ready Mix - Siskiyou County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	370.00	20.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	11/5/2020	5/30/2019
tblConstructionPhase	PhaseEndDate	9/10/2020	5/30/2019
tblConstructionPhase	PhaseEndDate	2/7/2019	1/10/2019
tblConstructionPhase	PhaseEndDate	4/11/2019	5/2/2019
tblConstructionPhase	PhaseEndDate	10/8/2020	5/30/2019
tblConstructionPhase	PhaseEndDate	2/21/2019	3/14/2019
tblConstructionPhase	PhaseStartDate	10/9/2020	5/3/2019
tblConstructionPhase	PhaseStartDate	4/12/2019	5/3/2019
tblConstructionPhase	PhaseStartDate	2/22/2019	3/15/2019
tblConstructionPhase	PhaseStartDate	9/11/2020	5/3/2019
tblConstructionPhase	PhaseStartDate	2/8/2019	3/1/2019
tblGrading	AcresOfGrading	87.50	12.70
tblGrading	MaterialImported	0.00	21,000.00

2.0 Emissions Summary

S. Oregon Ready Mix - Siskiyou County, Annual

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					
2019	0.6723	2.1691	1.5283	3.7900e-003	0.2786	0.0799	0.3586	0.1290	0.0740	0.2031	0.0000	346.7624	346.7624	0.0603	0.0000	348.2705
Maximum	0.6723	2.1691	1.5283	3.7900e-003	0.2786	0.0799	0.3586	0.1290	0.0740	0.2031	0.0000	346.7624	346.7624	0.0603	0.0000	348.2705

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					
2019	0.6723	2.1691	1.5283	3.7900e-003	0.2786	0.0799	0.3586	0.1290	0.0740	0.2031	0.0000	346.7622	346.7622	0.0603	0.0000	348.2703
Maximum	0.6723	2.1691	1.5283	3.7900e-003	0.2786	0.0799	0.3586	0.1290	0.0740	0.2031	0.0000	346.7622	346.7622	0.0603	0.0000	348.2703

[illegible]

S. Oregon Ready Mix - Siskiyou County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-11-2019	4-10-2019	1.0078	1.0078
2	4-11-2019	7-10-2019	1.8235	1.8235
		Highest	1.8235	1.8235

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	0.1286	9.0000e-005	0.0100	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Energy	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	13.6119	13.6119	2.4000e-004	6.0000e-005	13.6359
Mobile	0.0120	0.1054	0.1306	4.4000e-004	0.0229	4.9000e-004	0.0234	6.1600e-003	4.7000e-004	6.6300e-003	0.0000	40.5474	40.5474	2.8600e-003	0.0000	40.6190
Waste						0.0000	0.0000		0.0000	0.0000	1.0068	0.0000	1.0068	0.0595	0.0000	2.4944
Water						0.0000	0.0000		0.0000	0.0000	0.2935	3.7605	4.0540	0.0302	7.3000e-004	5.0253
Total	0.1406	0.1061	0.1412	4.4000e-004	0.0229	5.8000e-004	0.0235	6.1600e-003	5.6000e-004	6.7200e-003	1.3003	57.9392	59.2395	0.0929	7.9000e-004	61.7952

S. Oregon Ready Mix - Siskiyou County, Annual

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	0.1286	9.0000e-005	0.0100	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Energy	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	13.6119	13.6119	2.4000e-004	6.0000e-005	13.6359
Mobile	0.0120	0.1054	0.1306	4.4000e-004	0.0229	4.9000e-004	0.0234	6.1600e-003	4.7000e-004	6.6300e-003	0.0000	40.5474	40.5474	2.8600e-003	0.0000	40.6190
Waste						0.0000	0.0000		0.0000	0.0000	1.0068	0.0000	1.0068	0.0595	0.0000	2.4944
Water						0.0000	0.0000		0.0000	0.0000	0.2572	3.2957	3.5529	0.0265	6.4000e-004	4.4042
Total	0.1406	0.1061	0.1412	4.4000e-004	0.0229	5.8000e-004	0.0235	6.1600e-003	5.6000e-004	6.7200e-003	1.2640	57.4744	58.7385	0.0891	7.0000e-004	61.1741

	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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.79	0.80	0.85	4.03	11.39	1.01

3.0 Construction Detail**Construction Phase**

S. Oregon Ready Mix - Siskiyou County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/11/2019	1/10/2019	5	0	
2	Site Preparation	Site Preparation	3/1/2019	3/14/2019	5	10	
3	Grading	Grading	3/15/2019	5/2/2019	5	35	
4	Building Construction	Building Construction	5/3/2019	5/30/2019	5	20	
5	Paving	Paving	5/3/2019	5/30/2019	5	20	
6	Architectural Coating	Architectural Coating	5/3/2019	5/30/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12.7

Acres of Paving: 24.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 6,000; Non-Residential Outdoor: 2,000; Striped Parking Area: 64,800 (Architectural Coating – sqft)

OffRoad Equipment

S. Oregon Ready Mix - Siskiyou County, Annual

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

Trips and VMT

S. Oregon Ready Mix - Siskiyou County, Annual

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	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	2,076.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	455.00	178.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	91.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

[illegible]

S. Oregon Ready Mix - Siskiyou County, Annual

3.2 Demolition - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

S. Oregon Ready Mix - Siskiyou County, Annual

3.2 Demolition - 2019**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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.3 Site Preparation - 2019**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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	0.0217	0.2279	0.1103	1.9000e-004	0.0903	0.0120	0.1023	0.0497	0.0110	0.0607	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

S. Oregon Ready Mix - Siskiyou County, Annual

3.3 Site Preparation - 2019**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	7.3000e-004	5.8000e-004	5.3100e-003	1.0000e-005	7.0000e-004	1.0000e-005	7.1000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.7309	0.7309	5.0000e-005	0.0000	0.7321
Total	7.3000e-004	5.8000e-004	5.3100e-003	1.0000e-005	7.0000e-004	1.0000e-005	7.1000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.7309	0.7309	5.0000e-005	0.0000	0.7321

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	0.0217	0.2279	0.1103	1.9000e-004	0.0903	0.0120	0.1023	0.0497	0.0110	0.0607	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

S. Oregon Ready Mix - Siskiyou County, Annual

3.3 Site Preparation - 2019**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	7.3000e-004	5.8000e-004	5.3100e-003	1.0000e-005	7.0000e-004	1.0000e-005	7.1000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.7309	0.7309	5.0000e-005	0.0000	0.7321
Total	7.3000e-004	5.8000e-004	5.3100e-003	1.0000e-005	7.0000e-004	1.0000e-005	7.1000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.7309	0.7309	5.0000e-005	0.0000	0.7321

3.4 Grading - 2019**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					0.1121	0.0000	0.1121	0.0587	0.0000	0.0587	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0829	0.9541	0.5841	1.0900e-003		0.0417	0.0417		0.0384	0.0384	0.0000	97.4773	97.4773	0.0308	0.0000	98.2483
Total	0.0829	0.9541	0.5841	1.0900e-003	0.1121	0.0417	0.1538	0.0587	0.0384	0.0970	0.0000	97.4773	97.4773	0.0308	0.0000	98.2483

S. Oregon Ready Mix - Siskiyou County, Annual

3.4 Grading - 2019**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	0.0100	0.3178	0.0514	8.8000e-004	0.0174	1.4300e-003	0.0188	4.8000e-003	1.3700e-003	6.1600e-003	0.0000	83.7349	83.7349	4.2700e-003	0.0000	83.8416
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	2.8300e-003	2.2400e-003	0.0207	3.0000e-005	2.7300e-003	3.0000e-005	2.7600e-003	7.3000e-004	3.0000e-005	7.5000e-004	0.0000	2.8425	2.8425	1.9000e-004	0.0000	2.8471
Total	0.0129	0.3200	0.0720	9.1000e-004	0.0201	1.4600e-003	0.0216	5.5300e-003	1.4000e-003	6.9100e-003	0.0000	86.5774	86.5774	4.4600e-003	0.0000	86.6887

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					0.1121	0.0000	0.1121	0.0587	0.0000	0.0587	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0829	0.9541	0.5841	1.0900e-003		0.0417	0.0417		0.0384	0.0384	0.0000	97.4772	97.4772	0.0308	0.0000	98.2482
Total	0.0829	0.9541	0.5841	1.0900e-003	0.1121	0.0417	0.1538	0.0587	0.0384	0.0970	0.0000	97.4772	97.4772	0.0308	0.0000	98.2482

S. Oregon Ready Mix - Siskiyou County, Annual

3.4 Grading - 2019**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	0.0100	0.3178	0.0514	8.8000e-004	0.0174	1.4300e-003	0.0188	4.8000e-003	1.3700e-003	6.1600e-003	0.0000	83.7349	83.7349	4.2700e-003	0.0000	83.8416
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	2.8300e-003	2.2400e-003	0.0207	3.0000e-005	2.7300e-003	3.0000e-005	2.7600e-003	7.3000e-004	3.0000e-005	7.5000e-004	0.0000	2.8425	2.8425	1.9000e-004	0.0000	2.8471
Total	0.0129	0.3200	0.0720	9.1000e-004	0.0201	1.4600e-003	0.0216	5.5300e-003	1.4000e-003	6.9100e-003	0.0000	86.5774	86.5774	4.4600e-003	0.0000	86.6887

3.5 Building Construction - 2019**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	0.0236	0.2108	0.1716	2.7000e-004		0.0129	0.0129		0.0121	0.0121	0.0000	23.5104	23.5104	5.7300e-003	0.0000	23.6536
Total	0.0236	0.2108	0.1716	2.7000e-004		0.0129	0.0129		0.0121	0.0121	0.0000	23.5104	23.5104	5.7300e-003	0.0000	23.6536

S. Oregon Ready Mix - Siskiyou County, Annual

3.5 Building Construction - 2019**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	0.0138	0.2490	0.0887	5.6000e-004	0.0116	1.9200e-003	0.0135	3.3500e-003	1.8400e-003	5.1900e-003	0.0000	52.7929	52.7929	4.1700e-003	0.0000	52.8971
Worker	0.0368	0.0292	0.2686	4.1000e-004	0.0355	3.9000e-004	0.0359	9.4500e-003	3.6000e-004	9.8100e-003	0.0000	36.9521	36.9521	2.4200e-003	0.0000	37.0126
Total	0.0505	0.2782	0.3573	9.7000e-004	0.0471	2.3100e-003	0.0494	0.0128	2.2000e-003	0.0150	0.0000	89.7450	89.7450	6.5900e-003	0.0000	89.9097

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	0.0236	0.2108	0.1716	2.7000e-004		0.0129	0.0129		0.0121	0.0121	0.0000	23.5104	23.5104	5.7300e-003	0.0000	23.6536
Total	0.0236	0.2108	0.1716	2.7000e-004		0.0129	0.0129		0.0121	0.0121	0.0000	23.5104	23.5104	5.7300e-003	0.0000	23.6536

S. Oregon Ready Mix - Siskiyou County, Annual

3.5 Building Construction - 2019**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	0.0138	0.2490	0.0887	5.6000e-004	0.0116	1.9200e-003	0.0135	3.3500e-003	1.8400e-003	5.1900e-003	0.0000	52.7929	52.7929	4.1700e-003	0.0000	52.8971
Worker	0.0368	0.0292	0.2686	4.1000e-004	0.0355	3.9000e-004	0.0359	9.4500e-003	3.6000e-004	9.8100e-003	0.0000	36.9521	36.9521	2.4200e-003	0.0000	37.0126
Total	0.0505	0.2782	0.3573	9.7000e-004	0.0471	2.3100e-003	0.0494	0.0128	2.2000e-003	0.0150	0.0000	89.7450	89.7450	6.5900e-003	0.0000	89.9097

3.6 Paving - 2019**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	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0325					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0470	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371

S. Oregon Ready Mix - Siskiyou County, Annual

3.6 Paving - 2019**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	1.2100e-003	9.6000e-004	8.8500e-003	1.0000e-005	1.1700e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.2182	1.2182	8.0000e-005	0.0000	1.2202
Total	1.2100e-003	9.6000e-004	8.8500e-003	1.0000e-005	1.1700e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.2182	1.2182	8.0000e-005	0.0000	1.2202

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	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0325					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0470	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371

S. Oregon Ready Mix - Siskiyou County, Annual

3.6 Paving - 2019**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	1.2100e-003	9.6000e-004	8.8500e-003	1.0000e-005	1.1700e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.2182	1.2182	8.0000e-005	0.0000	1.2202
Total	1.2100e-003	9.6000e-004	8.8500e-003	1.0000e-005	1.1700e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.2182	1.2182	8.0000e-005	0.0000	1.2202

3.7 Architectural Coating - 2019**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	0.4218					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587
Total	0.4245	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587

S. Oregon Ready Mix - Siskiyou County, Annual

3.7 Architectural Coating - 2019**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	7.3500e-003	5.8400e-003	0.0537	8.0000e-005	7.1000e-003	8.0000e-005	7.1700e-003	1.8900e-003	7.0000e-005	1.9600e-003	0.0000	7.3904	7.3904	4.8000e-004	0.0000	7.4025
Total	7.3500e-003	5.8400e-003	0.0537	8.0000e-005	7.1000e-003	8.0000e-005	7.1700e-003	1.8900e-003	7.0000e-005	1.9600e-003	0.0000	7.3904	7.3904	4.8000e-004	0.0000	7.4025

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	0.4218					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586
Total	0.4245	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586

S. Oregon Ready Mix - Siskiyou County, Annual

3.7 Architectural Coating - 2019**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	7.3500e-003	5.8400e-003	0.0537	8.0000e-005	7.1000e-003	8.0000e-005	7.1700e-003	1.8900e-003	7.0000e-005	1.9600e-003	0.0000	7.3904	7.3904	4.8000e-004	0.0000	7.4025
Total	7.3500e-003	5.8400e-003	0.0537	8.0000e-005	7.1000e-003	8.0000e-005	7.1700e-003	1.8900e-003	7.0000e-005	1.9600e-003	0.0000	7.3904	7.3904	4.8000e-004	0.0000	7.4025

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

S. Oregon Ready Mix - Siskiyou County, Annual

	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	0.0120	0.1054	0.1306	4.4000e-004	0.0229	4.9000e-004	0.0234	6.1600e-003	4.7000e-004	6.6300e-003	0.0000	40.5474	40.5474	2.8600e-003	0.0000	40.6190
Unmitigated	0.0120	0.1054	0.1306	4.4000e-004	0.0229	4.9000e-004	0.0234	6.1600e-003	4.7000e-004	6.6300e-003	0.0000	40.5474	40.5474	2.8600e-003	0.0000	40.6190

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	27.88	5.28	2.72	61,477	61,477
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	27.88	5.28	2.72	61,477	61,477

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.487361	0.038770	0.180029	0.116952	0.034202	0.006373	0.008681	0.117611	0.001222	0.001581	0.005079	0.001001	0.001137
Other Asphalt Surfaces	0.487361	0.038770	0.180029	0.116952	0.034202	0.006373	0.008681	0.117611	0.001222	0.001581	0.005079	0.001001	0.001137

S. Oregon Ready Mix - Siskiyou County, Annual

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.8627	12.8627	2.3000e-004	5.0000e-005	12.8822
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.8627	12.8627	2.3000e-004	5.0000e-005	12.8822
NaturalGas Mitigated	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7492	0.7492	1.0000e-005	1.0000e-005	0.7537
NaturalGas Unmitigated	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7492	0.7492	1.0000e-005	1.0000e-005	0.7537

S. Oregon Ready Mix - Siskiyou County, Annual

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					
General Light Industry	14040	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7492	0.7492	1.0000e-005	1.0000e-005	0.7537
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7492	0.7492	1.0000e-005	1.0000e-005	0.7537

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					
General Light Industry	14040	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7492	0.7492	1.0000e-005	1.0000e-005	0.7537
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7492	0.7492	1.0000e-005	1.0000e-005	0.7537

S. Oregon Ready Mix - Siskiyou County, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	17120	12.8627	2.3000e-004	5.0000e-005	12.8822
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		12.8627	2.3000e-004	5.0000e-005	12.8822

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	17120	12.8627	2.3000e-004	5.0000e-005	12.8822
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		12.8627	2.3000e-004	5.0000e-005	12.8822

6.0 Area Detail**6.1 Mitigation Measures Area**

S. Oregon Ready Mix - Siskiyou County, Annual

	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	0.1286	9.0000e-005	0.0100	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Unmitigated	0.1286	9.0000e-005	0.0100	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207

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	0.0422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0854					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.3000e-004	9.0000e-005	0.0100	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Total	0.1285	9.0000e-005	0.0100	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207

S. Oregon Ready Mix - Siskiyou County, Annual

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	0.0422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0854					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.3000e-004	9.0000e-005	0.0100	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207
Total	0.1285	9.0000e-005	0.0100	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0194	0.0194	5.0000e-005	0.0000	0.0207

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

S. Oregon Ready Mix - Siskiyou County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.5529	0.0265	6.4000e-004	4.4042
Unmitigated	4.0540	0.0302	7.3000e-004	5.0253

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.925 / 0	4.0540	0.0302	7.3000e-004	5.0253
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		4.0540	0.0302	7.3000e-004	5.0253

S. Oregon Ready Mix - Siskiyou County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.81067 / 0	3.5529	0.0265	6.4000e-004	4.4042
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		3.5529	0.0265	6.4000e-004	4.4042

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.0068	0.0595	0.0000	2.4944
Unmitigated	1.0068	0.0595	0.0000	2.4944

S. Oregon Ready Mix - Siskiyou County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	4.96	1.0068	0.0595	0.0000	2.4944
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		1.0068	0.0595	0.0000	2.4944

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	4.96	1.0068	0.0595	0.0000	2.4944
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		1.0068	0.0595	0.0000	2.4944

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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S. Oregon Ready Mix - Siskiyou County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Proposed Project
Total
Fuel Usage

Action	Carbon Dioxide Equivalents (CO ₂ e) in Metric Tons	Conversion of Metric Tons to Kilograms	Construction Equipment Emission Factor ¹	Total Gallons of Fuel Consumed
Project Construction	348	348000	10.15	34,286
	Per CalEEMod Output Files. See Ambient Air Quality & Noise Consulting 2019	Per Climate Registry Equation 13e	Per Climate Registry Equation 13e	

Total Gallons Consumed During Project Construction: 34,286

Notes:
¹Fuel used by all construction equipment, including vehicle hauling trucks, assumed to be diesel.

Sources:

Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1*. January 2016.
<http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf>

Greenhouse Gas Impact Analysis Completed by ECORP Consulting for S. Oregon Ready Mix

Total Gallons Consumed During Project Operations

Area	Sub-Area	Cal. Year	Season	Veh_Tech	EMFAC2007 Category	Fuel_GAS	Fuel_DSL	Daily Total	ANNUAL TOTAL
Sub-Areas	Siskiyou (NEP)	2019	Annual	All Vehicles	All Vehicles	7.5639	0.0571	7.6211	2781.69

Sources:

California Air Resources Board. 2014. EMFAC2014 Mobile Emissions Model

Existing Traffic Noise - Interstate 5

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 2017-227

Project Name: South Oregon Ready Mix

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.

Source of Traffic Volumes: Caltrans 2017 Traffic Volumes

Community Noise Descriptor: L_{dn}: _____ CNEL: x

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition - EXISTING		Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway					Calc Dist
							Medium Trucks	Heavy Trucks	CNEL at 400 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL	
Analysis Condition														
Interstate 5 - Abrams Lake Rd to Deetz Rd		4	100	12,900	70	0.5	1.8%	0.7%	58.3	-	142	306	660	400