



INITIAL STUDY/
NEGATIVE DECLARATION

Biomass Transport and Utilization Project

MAY 2020

PREPARED FOR:

California Tahoe Conservancy
1061 Third Street
South Lake Tahoe, California 91650



California Department
of General Services
707 3rd Street
West Sacramento, California 95605



Initial Study/Negative Declaration
for the
Biomass Transport and Utilization Project

Prepared for:

California Tahoe Conservancy
1061 Third Street
South Lake Tahoe, California 96150

Contact: Joseph Harvey
530.543.6008

California Department of General Services
707 3rd Street
West Sacramento, California 95605

Contact: Stephanie Coleman
916.376.1602

Prepared By:

Ascent Environmental, Inc.
P.O. Box 5022
Stateline, Nevada 89449

Contact: Tiffany Lunday
775.750.5180

May 2020

TABLE OF CONTENTS

Section	Page
LIST OF ABBREVIATIONS	vi
1 INTRODUCTION	1-1
1.1 Introduction and Regulatory Guidance	1-1
1.2 Why this Document?.....	1-1
1.3 Summary of Findings	1-2
1.4 Document Organization	1-3
2 PROJECT DESCRIPTION	2-1
2.1 Project Overview.....	2-1
2.2 Project Objectives.....	2-6
2.3 Required Actions	2-6
2.4 Project Activities.....	2-6
3 ENVIRONMENTAL CHECKLIST	3-1
3.1 Aesthetics	3-4
3.2 Agriculture and Forest Resources.....	3-7
3.3 Air Quality	3-9
3.4 Biological Resources.....	3-18
3.5 Cultural Resources	3-23
3.6 Energy.....	3-25
3.7 Geology and Soils	3-27
3.8 Greenhouse Gas Emissions	3-31
3.9 Hazards and Hazardous Materials	3-37
3.10 Hydrology and Water Quality	3-43
3.11 Land Use and Planning.....	3-47
3.12 Mineral Resources.....	3-48
3.13 Noise.....	3-49
3.14 Population and Housing	3-53
3.15 Public Services.....	3-54
3.16 Recreation.....	3-57
3.17 Transportation.....	3-59
3.18 Tribal Cultural Resources	3-63
3.19 Utilities and Service Systems	3-66
3.20 Wildfire.....	3-68
3.21 Cumulative Impacts and Mandatory Findings of Significance.....	3-70
4 REFERENCES	4-1
5 REPORT PREPARERS	5-1

Appendices

Appendix A – Air Quality and Greenhouse Gas Emissions Calculations

Figures

Figure 2-1	Project Location: Collection Points and Potential Receiving Facilities	2-2
Figure 2-2	Collection Points Associated with the Meeks Creek Meadow Restoration Project.....	2-3
Figure 2-3	South Tahoe Fuels Treatment Project Parcel Locations.....	2-4
Figure 2-4	State Parks Collection Point at Sugar Pine Point State Park.....	2-5

Tables

Table 3-1	Criteria Air Pollutants	3-10
Table 3-2	Ambient Air Quality Standards and Designations for the Lake Tahoe Air Basin	3-11
Table 3-3a	Short-term Emissions of Criteria Air Pollutants – South Tahoe Project and Meeks Creek Meadow Project Treatment Units.....	3-14
Table 3-3b	Short-term Emissions of Criteria Air Pollutants – Sugar Pine Point Project Treatment Unit.....	3-15
Table 3-4	2017 Statewide GHG Emissions by Economic Sector	3-32
Table 3-5	Summary of Greenhouse Gas Emissions.....	3-34
Table 3-6	El Dorado County Noise Ordinance Noise Level Standards for Sensitive Receptors	3-51
Table 3-7	Noise Emission Levels from Equipment Associated with the Proposed Project	3-51
Table 3-8	Summary of Native American Outreach	3-64
Table 3-10	Cumulative Projects List.....	3-72

LIST OF ABBREVIATIONS

AB	Assembly Bill
CAA	federal Clean Air Act
CAAA	Clean Air Act Amendments of 1990
CAAQS	California Ambient Air Quality Standard
Cal OES	Governor's Office of Emergency Services
Cal/OSHA	California Occupational Safety and Health Administration
CalEPA	California Environmental Protection Agency
California MUTCD	<i>California Manual on Uniform Traffic Control Devices</i>
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	Code of Regulations
CDFA	California Department of Food and Agriculture
CE	Categorical Exclusion
CEQA	California Environmental Quality Act
CH ₄	methane
CNRA	California Natural Resources Agency
CO ₂	carbon dioxide
Conservancy	California Tahoe Conservancy
CUPA	Certified Unified Program Agency
DGS	California Department of General Services, Real Estate Services Division
diesel PM	diesel particulate matter
DM	Decision Memorandum
draft plan	<i>Draft California 2030 Natural and Working Lands Climate Change Implementation Plan</i>
DTSC	California Department of Toxic Substances Control
EDCAQMD	El Dorado County Air Quality Management District
EO	Executive Order
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gas
I-80	Interstate 80
IS/ND	Initial Study/Negative Declaration
IS/Proposed ND	Initial Study/Proposed Negative Declaration
lb/day	pounds per day
lb/hr	pounds per hour
LTAB	Lake Tahoe Air Basin
LTBMU	Lake Tahoe Basin Management Unit

MCAB	Mountain Counties Air Basin
MMT	million metric tons
MMTCO ₂ e	million metric tons of carbon dioxide equivalent
MRZ	mineral resource zones
N ₂ O	nitrous oxide
NAAQS	National Air Quality Ambient Standards
NEPA	National Environmental Policy Act
NFS	National Forest System
NHTSA	National Highway Traffic Safety Administration
NO _x	nitrogen oxides
NSAQMD	Northern Sierra Air Quality Management District
OES	Office of Emergency Services
OSHA	federal Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbon
PCAPCD	Placer County Air Pollution Control District
PM ₁₀	respirable particulate matter with an aerodynamic diameter of 10 micrometers or less
PM _{2.5}	fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less
proposed project	proposed Biomass Transport and Utilization Project
ROG	reactive organic gases
RTP	<i>Linking Tahoe: Regional Transportation Plan</i>
SB	Senate Bill
SGC	California Strategic Growth Council
SIP	State Implementation Plan
SR	State Route
State Parks	California State Parks
TAC	toxic air contaminant
TCR	tribal cultural resource
TRPA	Tahoe Regional Planning Agency
TTC	temporary traffic control
U.S. 50	U.S. Highway 50
USC	U.S. Code
VMT	vehicle miles traveled
WUI	Wildland-Urban Interface

1 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This Initial Study/Negative Declaration (IS/ND) has been prepared by the California Tahoe Conservancy (Conservancy), as lead agency, and the California Department of General Services, Real Estate Services Division (DGS) to evaluate potential environmental effects resulting from the proposed Biomass Transport and Utilization Project (proposed project), which involves the handling, transport, and disposition of biomass generated by three forest fuels treatment projects—the South Lake Tahoe Fuels Treatment Project, the Meeks Meadow Restoration Project, and the Fuels Reduction and Understory Burning Project implemented at Ed Z'berg Sugar Pine Point State Park (Sugar Pine Point State Park). Chapter 2, “Project Description,” presents detailed proposed project information.

Under CEQA, the lead agency is the public agency with primary responsibility for carrying out or approving a project that has the potential for resulting, directly or indirectly, in a physical change to the environment (State CEQA Guidelines Section 15367). The Conservancy is the CEQA lead agency, because it is the agency responsible for taking the discretionary action to consider approval of the use of California Department of Forestry and Fire Protection California Climate Investments funding to implement the proposed project on lands managed by California State Parks and the U.S. Forest Service, Lake Tahoe Basin Management Unit. DGS assisted the Conservancy in preparing this environmental document.

This document has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). An initial study is prepared by a lead agency to determine if a project may have a significant effect on the environment (State CEQA Guidelines Section 15063[a]) and to determine the appropriate environmental document. In accordance with State CEQA Guidelines Section 15070, a “public agency shall prepare...a proposed negative declaration or mitigated negative declaration...when: (a) The Initial Study shows that there is no substantial evidence...that the project may have a significant impact on the environment, or (b) The Initial Study identifies potentially significant effects but revisions to the project plans or proposal are agreed to by the applicant and such revisions would reduce potentially significant effects to a less-than-significant level.” In this circumstance, the lead agency prepares a written statement describing its reasons for concluding that the project would not have a significant effect on the environment and, therefore, does not require the preparation of an Environmental Impact Report (EIR). By contrast, an EIR is required when the project may have a significant environmental impact that cannot clearly be reduced to a less-than-significant effect by adoption of mitigation or by revisions in the project design.

1.2 WHY THIS DOCUMENT?

As described in the environmental checklist portion of this document (Chapter 3), the environmental analysis indicates that the proposed project would not result in any significant effects on the environment. Therefore, pursuant to State CEQA Guidelines Section 15070, an IS/ND is the appropriate document for compliance with the requirements of CEQA. This IS/ND conforms to these CEQA requirements and to the content requirements of State CEQA Guidelines Section 15071.

The purpose of this IS/ND is to present information about the environmental consequences of implementing the proposed project to decision makers and to the public. This disclosure document is being made available to the public for review and comment. This IS/ND will be available for a 30-day public review period from May 1, 2020 to June 1, 2020.

Supporting documentation referenced in this IS/ND is available in electronic format for review at:

California Tahoe Conservancy
1061 Third Street
South Lake Tahoe, California 96150

Due to COVID-19 office closures and restrictions, alternative arrangements for viewing supporting documentation may be required. If you would like to review such documents, please email Joseph Harvey:

Joseph.Harvey@tahoe.ca.gov.

A digital copy of this IS/ND is available on the Conservancy's website:

<http://www.tahoe.ca.gov>

Written comments may be submitted via U.S. mail to:

Joseph Harvey
California Tahoe Conservancy
1061 Third Street
South Lake Tahoe, CA 96150

Written comments may be submitted by email to:

Joseph.Harvey@tahoe.ca.gov

If you have questions regarding the IS/ND, please contact Joseph Harvey by phone: (530) 543-6008, or by email: Joseph.Harvey@tahoe.ca.gov.

If you wish to submit written comments on the IS/ND (including via email), they must be postmarked by June 1, 2020.

After comments are received from the public and reviewing agencies, the Conservancy may (1) adopt the ND and approve the proposed project; (2) undertake additional environmental studies; or (3) abandon the proposed project. The project proponents may proceed with the proposed project if the Conservancy Board approves and funds the proposed project.

1.3 SUMMARY OF FINDINGS

Chapter 3 of this document contains the analysis and discussion of potential environmental impacts of the proposed project.

Based on the issues evaluated in that chapter, it was determined that the proposed project would have either no impact or a less-than-significant impact related to all issue areas identified in the Environmental Checklist, included as Appendix G of the State CEQA Guidelines. These include the following issue areas:

- ▶ Aesthetics
- ▶ Agriculture and Forest Resources
- ▶ Air Quality
- ▶ Biological Resources
- ▶ Cultural Resources
- ▶ Energy
- ▶ Geology and Soils
- ▶ Greenhouse Gas Emissions
- ▶ Hazards and Hazardous Materials
- ▶ Hydrology and Water Quality
- ▶ Land Use and Planning
- ▶ Mineral Resources
- ▶ Noise
- ▶ Population and Housing
- ▶ Public Services
- ▶ Recreation
- ▶ Transportation
- ▶ Tribal Cultural Resources
- ▶ Utilities and Service Systems
- ▶ Wildfire

1.4 DOCUMENT ORGANIZATION

This IS/ND is organized as follows:

- ▶ **Chapter 1: Introduction.** This chapter provides an introduction to the environmental review process. It describes the purpose and organization of this document as well as presents a summary of findings.
- ▶ **Chapter 2: Project Description.** This chapter describes the proposed project location, identifies proposed project objectives, and provides a description of the proposed project.
- ▶ **Chapter 3: Environmental Checklist.** This chapter presents an analysis of a range of environmental issues identified in the CEQA Environmental Checklist and determines if proposed project actions would result in no impact, a less-than-significant impact, a less-than-significant impact with mitigation incorporated, or a potentially significant impact. If any impacts were determined to be potentially significant, an EIR would be required. For this project, however, none of the impacts were determined to be significant.
- ▶ **Chapter 4: References.** This chapter lists the references used in preparation of this IS/ND.
- ▶ **Chapter 5: Report Preparers.** This chapter lists the authors of each chapter and section.
- ▶ **Appendices.** Appendix A includes detailed air quality and greenhouse gas emissions calculations that support the analysis in Chapter 3.

This page intentionally left blank.

2 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

The California Tahoe Conservancy (Conservancy), as lead agency, proposes to fund, upon Board approval, the processing and transport of up to 17,500 tons of biomass (proposed project) generated from three forest fuels treatment projects within the Lake Tahoe Basin using California Department of Forestry and Fire Protection California Climate Investments funding. The proposed project will be implemented by the Washoe Tribe of California and Nevada (Washoe Tribe), The Great Basin Institute, and The Department of Parks and Recreation through forestry contractors (collectively, project proponents). Biomass in the form of slash (i.e., non-merchantable woody debris such as small diameter trees, salvage materials, and treetops) generated by the fuel treatment activities is proposed to be chipped, truck-loaded, and hauled from forest fuels treatment sites to receiving facilities throughout the region, which primarily include bioenergy generation facilities. The proposed project also includes the potential transport of biomass in the form of firewood for use as home heating fuel for the Washoe Tribe, and transport to the Alpine wood products facility in Sutter, California for the creation of pulp for use in the manufacture of wood products. The project location includes landings within the fuels treatment sites (collection points) and receiving facilities, as described below in Section 2.4, "Project Location," and are identified on Figure 2-1. The Conservancy would also fund creation of mulch for use in site restoration at Meeks Creek Meadow, which is an activity that was previously analyzed and approved in the Initial Study/Negative Declaration for the Mayala Wata Restoration Project at Meeks Meadow. As such, the use of biomass as chip mulch for site restoration is not analyzed in this IS/ND.

The Conservancy's involvement and discretionary action, subject to Conservancy Board approval, includes funding the hauling of biomass for use as fuel for electricity generation, home heating fuel for use by the Washoe Tribe, and as pulp for use in wood products; and the use of biomass as mulch for site restoration within Meeks Creek Meadow. Hence, the proposed project and the analysis in this IS/ND focuses only on actions specific to biomass processing, collection, transport, and utilization. Activities associated with the proposed project are limited to chipping, truck loading, hauling, and drop off of biomass material, described in detail below. As such, the geographic area addressed by the analysis in this IS/ND varies by resource but is focused on the collection points where material would be chipped and loaded, and therefore, where most of the physical effects of the proposed project would occur. For environmental issues related to travel, such as air quality, greenhouse gas emissions, noise and traffic, the area analyzed also encompasses travel routes to the receiving facilities.

2.2 PROJECT OBJECTIVES

The Conservancy's primary objectives of the proposed project are to:

- ▶ reduce greenhouse gases and further the purposes of California's Global Warming Solutions Act of 2006,
- ▶ reduce wood smoke and air emissions within the Lake Tahoe Basin that may otherwise result from the prescribed burning of slash piles to manage fuels generated by forest fuels treatment projects, and
- ▶ use slash material generated from fuels reduction/forest thinning projects as biomass fuel for alternative uses including renewable energy production and home heating, and
- ▶ use slash material generated from fuels reduction/forest thinning projects for non-energy uses including raw pulp material for wood products and as mulch for forest fuels treatment site restoration.

2.3 REQUIRED ACTIONS

Following completion of the environmental review process, the Conservancy will likely recommend that the Board review the IS/ND, adopt the ND, and authorize the project. No other permits or approvals are required to implement the project.

2.4 PROJECT LOCATION

The project location includes both the collection points and receiving facilities, as described below and shown in Figure 2-1.

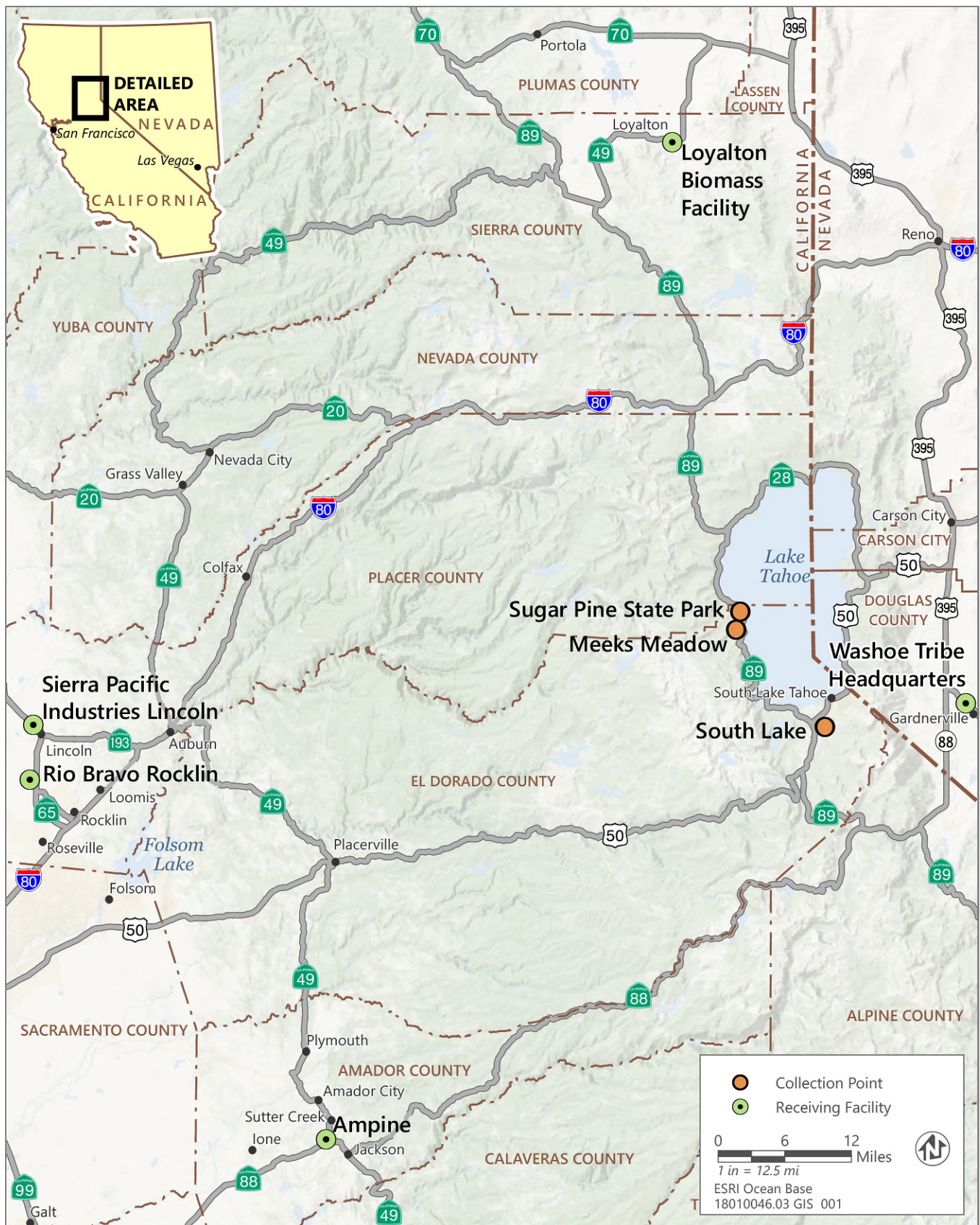
Biomass would be sourced from slash piles at various collection points, as follows:

- ▶ The existing slash pile at Sugar Pine Point State Park (Figure 2-2), which acts as the main collection point for all slash generated by State Parks forest fuels thinning treatment projects, and is located on Department of Parks and Recreation land in El Dorado County, on the west shore of Lake Tahoe, just south of Tahoma.
- ▶ Slash piles at landings within Meeks Creek Meadow (Figure 2-3), which will be implemented under the Mayala Wata Restoration Project at Meeks Meadow/Meeks Creek Meadow Restoration Project on US Forest Service land in El Dorado County, west of SR 89 at Meeks Bay. Landings within Meeks Creek Meadow will be established before initiation of the proposed project.
- ▶ Slash piles at landings identified as central collection points within the South Tahoe Fuels Treatment Project parcels (Figure 2-4) located on US Forest Service land in El Dorado County, which will be established before initiation of the proposed project.

A landing is the site where slash piles and biomass materials will be gathered during implementation of the fuels treatment activities, before initiation of the proposed project. Development of landings is in no way part of the proposed project. Therefore, for purposes of the proposed project, the above areas are referred to as “collection points” throughout this document, except when specifically referring to fuel treatment activities.

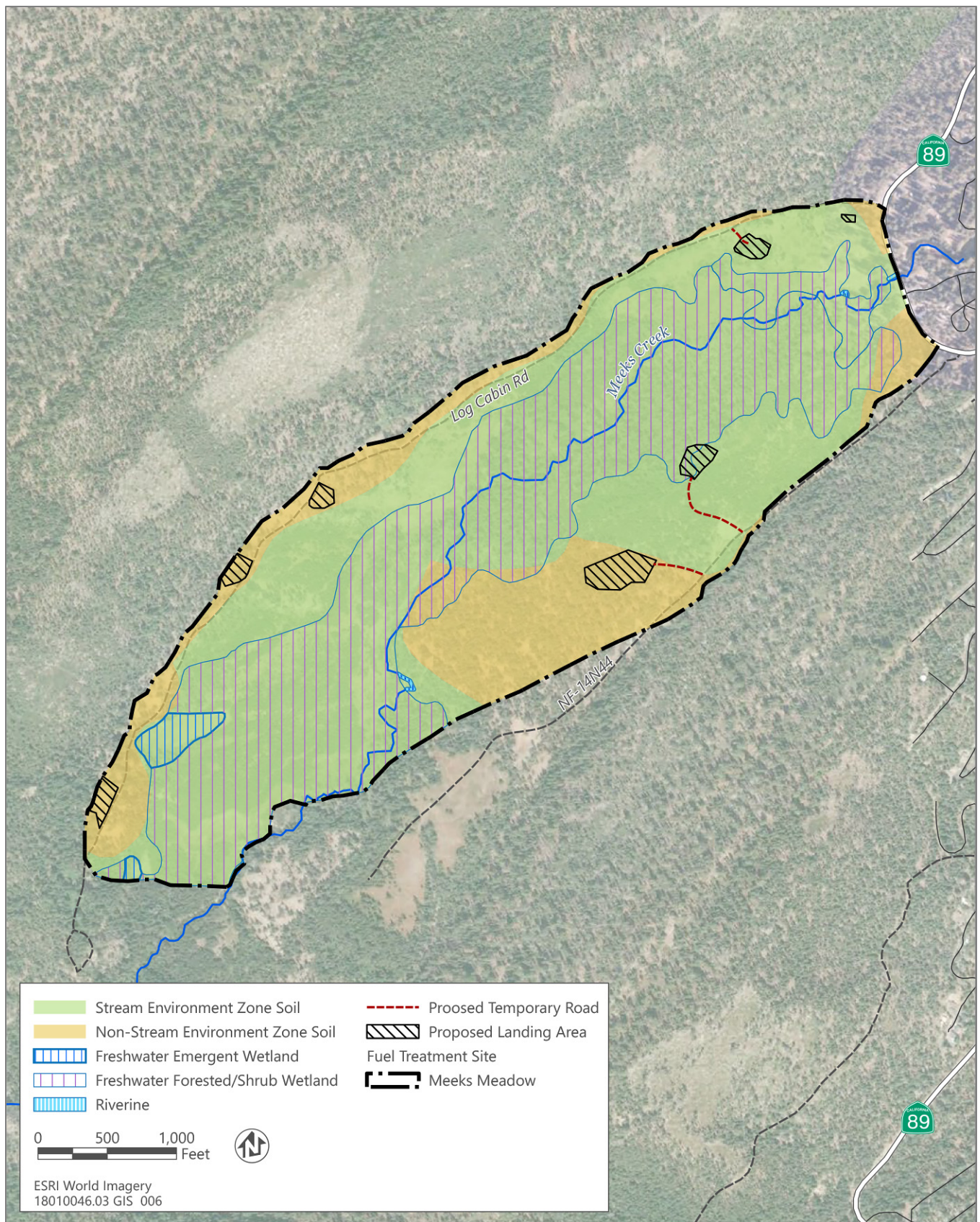
Five potential locations have been identified as proposed receiving facilities for the biomass:

- ▶ Rio Bravo Rocklin, located in Lincoln, California
- ▶ Sierra Pacific Industries Lincoln, located in Lincoln, California
- ▶ Loyalton Biomass, located in Loyalton, California
- ▶ Ampine, located in Sutter, California
- ▶ Washoe Tribe Headquarters, located in Gardnerville, Nevada



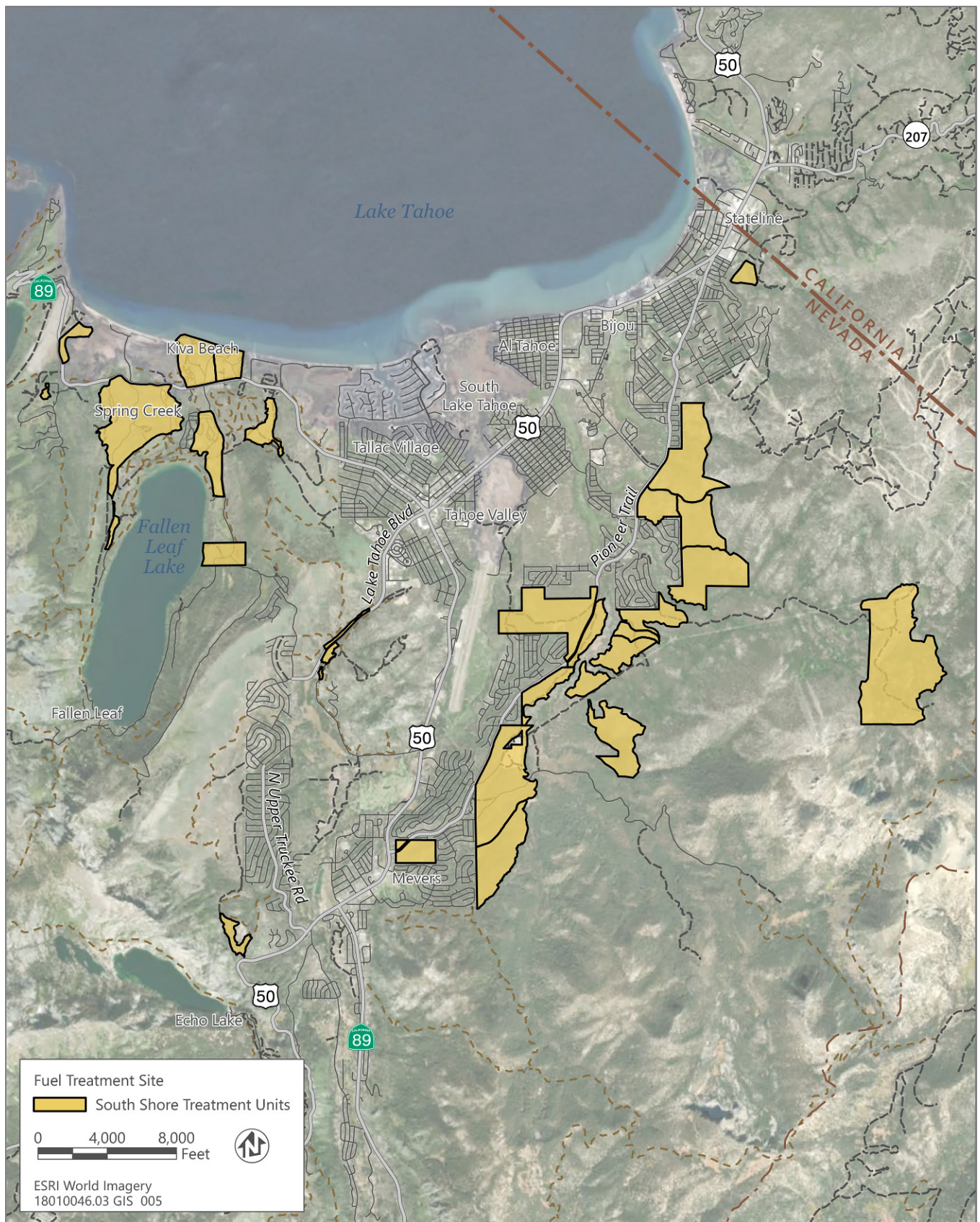
Source: adapted by Ascent Environmental in 2020

Figure 2-1 Project Location: Collection Points and Potential Receiving Facilities



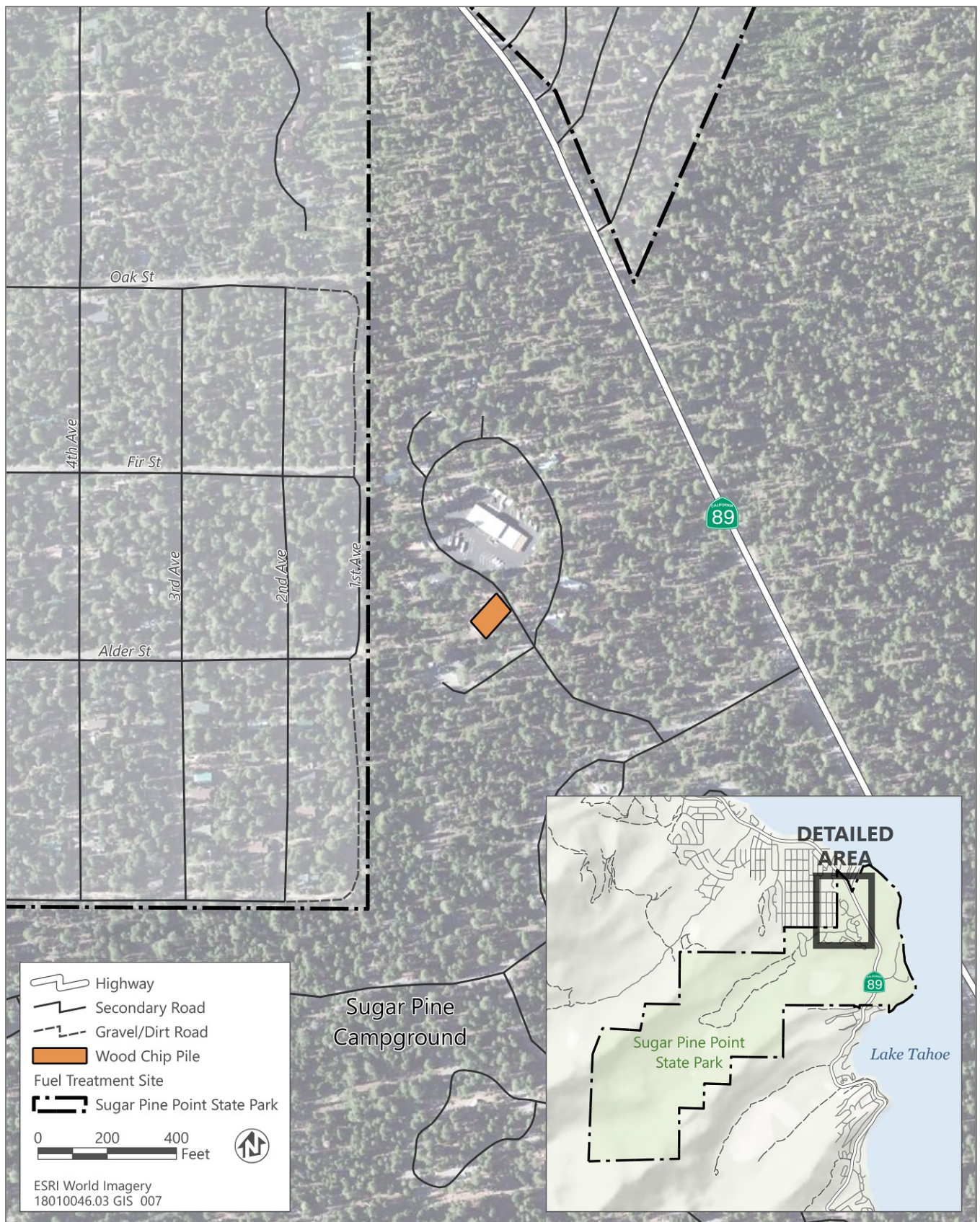
Source: adapted by Ascent Environmental in 2020

Figure 2-2 Collection Points Associated with the Meeks Creek Meadow Restoration Project



Source: adapted by Ascent Environmental in 2020

Figure 2-3 South Tahoe Fuels Treatment Project Parcel Locations



Source: adapted by Ascent Environmental in 2020

Figure 2-4 State Parks Collection Point at Sugar Pine Point State Park

2.5 PROJECT ACTIVITIES

The proposed project would chip and transport biomass from slash piles located at collection points at Sugar Pine Point State Park, Meeks Creek Meadow, and within treatment parcels of the South Tahoe Fuels Treatment project. Biomass in the form of woodchips collected at Sugar Pine Point State Park are generated by California State Parks' yearly accumulation from multiple activities, such as general maintenance, hazard tree removal, and forest restoration from several parks within the Sierra District. An estimated 500 tons of woodchips are generated and placed each year at this collection point. As part of the proposed project, biomass material stockpiled for follow-up management would be truck-loaded and hauled over either two or three field seasons (approximately May through November, but could occur over the winter as well, as weather conditions permit), during 2020, 2021, and 2022. Consequently, up to an estimated 1,500 tons of material could be hauled from the collection point at Sugar Pine Point State Park over the duration of the proposed project. The Meeks Creek Meadow and South Tahoe Fuels Treatment projects would generate a combined 16,000 green tons of material consisting of non-merchantable slash from fuels treatment activities loaded into slash piles at designated collection points. As part of the proposed project, biomass material stockpiled for follow-up management from these areas would be truck-loaded and hauled over either two or three field seasons (approximately May through November, but could occur over the winter as well, as weather conditions permit), during 2020, 2021, and 2022. Consequently, a maximum of approximately 8,000 green tons of material could be hauled from these two collection points, combined, during one field season.

One loader, one chipper, and one haul truck would be required at collection points to implement activities associated with the proposed project. The chipper would be loaded with material from the slash piles via a loader, and material would be automatically chipped and deposited directly into the haul truck. Up to six workers would be present at collection points during chipping and loading of material, working to break down, chip, and load material into the haul truck. Additional equipment that may be required would include a chain saw, which would be utilized to assist in breaking down material to be loaded into the chipper.

Activities related to loading the chipper, chipping biomass material, and loading the haul truck, would all occur within the footprint of the above-described collection points. These activities would be carried out concurrently with forest fuels treatment activities taking place in the immediate vicinity. Chipping, loading, and hauling biomass would serve as a complementary activity in the management of biomass generated by forest fuels treatments. Activities at collection points would occur during daylight hours, generally between 8:00a.m. and 5:00p.m., but hauling material may occur outside of these hours, especially during summer or during peak tourist periods.

In conducting forest treatments, State Parks determines the appropriate fate of fuels material placed in slash piles based on site-specific conditions, but material management includes pile burning, chip and broadcast, and chip and removal of material (Shaw, pers. comm., 2020). The Forest Service Lake Tahoe Basin Management Unit (LTBMU) manages non-merchantable fuel from forest treatments similarly; including pile burning, chip and broadcast, and removal of material. It is assumed for the purpose of calculating air quality and greenhouse gas emissions that biomass material identified for removal or use as ground cover under the proposed project would otherwise be stockpiled for follow-up prescribed burning. Additionally, for the purposes of calculating air quality and greenhouse gas emissions, it is assumed that all material would be hauled (versus for onsite use as chip mulch), as this represents the greatest potential impact to these resources and therefore gives the greatest flexibility for operations during implementation.

2.5.1 Collection Points

The collection points identified above will be typical of landings developed for forest fuels treatment activities. Collection points would be approximately 1 to 3 acres in size; and cleared, graded, and fully implemented before the start of the proposed project. Therefore, the proposed project involves the utilization of these sites, but does not involve their development. These sites provide space for temporary stockpiling and processing of woody materials

generated by vegetation management, as well as space for loading the haul trucks, chipping biomass, and access for other, related service vehicles. With the exception of the collection point at Sugar Pine Point State Park, vegetation brought to the collection points would be continually sorted and processed onsite, based on material type, such that multiple piles of material would be present in various stages of processing, including merchantable logs, slash, chips, and firewood. At the Sugar Pine Point State Park collection point, there is a single chip pile that is processed from biomass accumulated from multiple California State Parks activities, such as general maintenance, hazard tree removal, and forest restoration from several parks within the Sierra District. Biomass associated with the proposed project would consist of slash: non-merchantable woody debris (small diameter trees, salvage materials, and treetops) generated by fuel treatments, and firewood. The placement of slash piles and firewood at collection points would occur under the fuels treatment activities and would not be associated with the proposed project. The proposed project would only use collection points for chipping slash and loading chips and fuelwood into the haul truck.

2.5.2 Receiving Facilities

Five locations have been identified as receiving facilities for the biomass that would be transported under the proposed project. These receiving facilities represent reasonably foreseeable features of the proposed project. If other destinations arise that are within the greatest distance analyzed in this document (270 miles), they could also be used if the facilities comport with this IS/ND and no potentially significant environmental effects would occur. If necessary, additional environmental analysis or documentation would be undertaken. These facilities, and the type of material they would receive, are described below.

The Loyalton biomass facility sources biomass for energy production from nine counties, comprising 5 million acres within an approximately 1-hour drive of the facility. Historically, more than 90 percent of the biomass fuel for the facility has been sourced from harvested material from forest thinning activities in the surrounding national forests, similar in type to the material associated with the proposed project. The Rio Bravo Rocklin facility is a 24.4-megawatt biomass facility located in the community of Lincoln, California. It accepts primarily forest material waste, and approximately 10 percent urban and agricultural waste that would otherwise go to landfills. Sierra Pacific Industries facility in Lincoln, California is an 18-megawatt biomass facility that turns wood waste into energy through a cogeneration plant. Bark, sawdust, and other low-grade byproducts from the sawmill manufacturing process is the primary fuel; however, the facility also accepts non-merchantable biomass products from forest thinning activities. Some of the power produced is used to operate the mill, and excess electricity is sold to local public utilities and energy service providers.

These facilities operate under existing regulatory compliance permits, including General Industrial Storm Water Discharge Permits (issued by the Central Valley Regional Water Quality Control Board), Permits to Operate and Title V permits issued by the appropriate Air Quality Management Districts, and U.S. Environmental Protection Agency Prevention of Significant Deterioration permits. Biomass material from the proposed project would be included as regular feedstock to these biomass facilities and would constitute a continuation of the current daily volume of biomass fuel consumed at them.

The Ampine wood products facility in Sutter Creek, California, is a particle board manufacturing facility that uses wood residue primarily from sawmills, plywood plants and post-consumer use sources, and, to a lesser extent, pulped forest fuel material. Production at the facility requires approximately 700 tons of wood residue per day. Biomass material from the proposed project would be included as regular feedstock to this facility and would constitute a continuation of the current daily volume of material consumed at it.

The fifth receiving facility for biomass is Washoe Tribe headquarters, located in Gardnerville, Nevada. This location would receive firewood for members of the Washoe Tribe for use as home heating fuel.

2.5.3 Travel Routes

Slash piles at the above collection points would be accessed by equipment and workers via existing roads. The slash pile at the Sugar Pine Point State Park collection point is within a developed, paved area and is accessible by paved road. Slash piles at the collection points in Meeks Creek Meadow would be accessed by existing, unpaved Forest Service roads; and slash piles at the collection points in the South Tahoe fuels treatment area would be accessed by a combination of local connector streets, and existing paved or unpaved Forest Service roads. Traffic generated by the proposed project would travel on local connector streets and state and interstate highways. No new roads or landings would be developed to accommodate the activities associated with the proposed project.

Possible highway travel routes include:

- ▶ U.S. Highway 50 (U.S. 50) from South Lake Tahoe to the junction with SR 49 in California;
- ▶ SR 49 along segments from the Loyalton Biomass facility to the junction with SR 89, and between the town of Auburn and the Ampine wood products facility in Sutter Creek, California;
- ▶ SR 89 along the segment from the junction with SR 49 to the junction with SR 88;
- ▶ SR 88 along the segment from the junction with SR 89 to the Ampine wood products facility in Sutter Creek, California;
- ▶ SR 193 along the segment from the junction with I-80 to the Sierra Pacific Industries Lincoln facility in Lincoln, California;
- ▶ SR 65 along the segment from the junction with I-80 to the Sierra Pacific Industries Lincoln facility in Lincoln, California;
- ▶ I-80 from the junction with SR 89 to the junction with SR 65.

These travel routes represent reasonably foreseeable features of the proposed project. If other routes arise that have similar distances, but do not exceed the furthest distance analyzed in this document (270 miles), they could also be used if the facilities comport with this IS/ND and no potentially significant environmental effects would occur. If necessary, additional environmental analysis or documentation would be undertaken.

The proposed project operations would involve the use of up to six employee vehicles and one haul truck per day during treatment activities. As stated above, haul routes to receiving facilities would include a combination of local connector streets and state and interstate highways. Although as a practical matter the route with the shortest haul distance would likely be used, for the purpose of the air quality analysis in this document, it is assumed that biomass material would be hauled along the route that reflects the greatest hauling distance. This route is approximately 270 miles and is the farthest possible distance that could be traveled in one day. This approach was taken because air quality emissions are calculated on a pounds per day basis. This is a reasonable approach to the environmental analysis, which seeks to avoid the risk of understating potential environmental effects of hauling operations.

2.5.4 Temporary Signage and Recreation Access

The project proponent would restrict access to collection points to recreational use to protect public safety. Before treatment, the forestry contractor would post signs on well-established trails and roads leading to collection points, warning trail users of trail closures. The project proponent would post orange signs at the entrance to collection points and on access roads during operations. The project proponent would adhere to Design Features and Construction Controls, described below, to avoid impacts and maintain existing roads and trails in a safe and usable condition following operations.

2.5.5 Project Design Features and Construction Controls

The forest fuel treatments identified for biomass removal include the Meeks Creek Meadow Restoration Project, the South Tahoe Fuels Treatment Project, and the State Parks annual forest thinning program implemented at Sugar Pine Point State Park under the Fuels Reduction and Understory Burning Project. These treatments were previously analyzed, reviewed and approved under prior environmental review processes, as follows:

- ▶ Meeks Creek Meadow Restoration Project.
 - a CEQA Initial Study/Negative Declaration (IS/ND) prepared by the Lahontan Regional Water Quality Control Board (California State Clearinghouse No. 2018112063) dated January 2019; and
 - a National Environmental Policy Act (NEPA) Categorical Exclusion (CE) supported by a Decision Memorandum (DM) prepared by LTBMU and signed on May 20, 2013.
- ▶ South Tahoe Fuels Treatment Project.
 - a NEPA CE supported by a DM prepared by LTBMU and signed on April 14, 2018.
- ▶ Fuels Reduction and Understory Burning Project at Sugar Pint State Park.
 - a CEQA Initial Study/Mitigated Negative Declaration prepared by State Parks (California State Clearinghouse No. 2012042002) dated March 2012.

Environmental review of the above forest fuels treatments included identification of treatment features and mitigation measures, as appropriate, to avoid impacts on certain resource areas when developing landing sites (which will be the collection points for the proposed project) and temporary access roads. It is understood that all identified treatment features and mitigation measures would be implemented during development of temporary access roads and landings, before implementation of the proposed project.

Project design features and construction controls would be incorporated into design of the proposed project, included as contract specifications, and in instructions to all personnel involved in implementing the proposed project. These measures are intended to minimize environmental impacts. Implementation of the proposed project will include the following design features and construction controls:

- ▶ Compliance with all applicable general requirements and other provisions of Category 1 within the 2014 Timber Waiver issued by the Lahontan Regional Water Quality Control Board. Such measures include: use of temporary water quality best management practices (BMPs) to prevent sediment or other contaminants from flowing into surface waters, regular monitoring of equipment to prevent leaks or spills, maintenance of an emergency spill kit on site during all operations to contain fuel or other spilled materials, and prohibitions against operating equipment on soils that are saturated.
- ▶ Sediment and erosion control measures shall be implemented at landings and along roads that would be used for the proposed project, and such areas would be maintained according to LTBMU, Tahoe Regional Planning Agency (TRPA), and State Parks BMPs for construction and maintenance of such features.
- ▶ To prevent the spread of noxious weeds, all off-road equipment shall be cleaned before entry to unpaved collection points to remove all soil, plant parts, seeds, vegetative matter, or other debris that could contain or hold seeds.
- ▶ Prior to beginning work at a collection point, a qualified biologist shall conduct a nesting bird and wildlife survey and, based on the biologist's expertise, may limit work at the collection point for the protection of any identified species. Crews shall be trained to identify any roosting bird of prey, or any nesting wildlife species. Project work shall cease in the vicinity of a newly discovered nest, den, or wildlife habitation site pending review by a qualified biologist.
- ▶ Temporary traffic safety measures that provide the public with adequate warning of potentially hazardous conditions associated with vehicle access and hauling shall be implemented. These measures shall include posting signs that meet the requirements of Manual on Uniform Traffic section 61.1.6B that warn of logging

operations or truck crossings. Such signs shall be removed when no longer required. Before project activities, signage in the neighborhood that identifies the timing and duration of operations associated with the project shall be posted. Truck drivers will be instructed to maintain safe driving speeds and be alert for the presence of pedestrians and children along neighborhood haul routes.

- ▶ Project activities shall be conducted in compliance with safety requirements for employees. The appropriate agency shall be notified of any personal injury accidents or other accident or vandalism of property.
- ▶ To protect air, soil, and water quality, operations shall be conducted in a sanitary and safe manner. All operating equipment shall be maintained in working order and servicing of equipment shall not occur within collection points. Storage containers for oil or oil products shall be secured to prevent any spill of oil or oil products from entering any stream of other waters of the United States or California.
- ▶ All equipment shall be monitored for leaks, and removed from service if necessary, to protect water quality.
- ▶ All spills shall be immediately contained, and spilled materials and/or contaminated soils shall be properly disposed.
- ▶ An emergency spill kit adequate to contain spills that could result from on-site equipment shall be readily available at all times during project implementation.
- ▶ In the event of a release of hazardous substances, all appropriate agencies shall be immediately notified. All work shall stop on the project and not start again until all required mitigation has been remedied.
- ▶ Any incidental damage caused by this project to existing trails and roads that are disturbed by equipment accessing the collection points shall be repaired and rehabilitated to ensure that existing roads and trails, are open and free of masticated material or other debris after the collection points and roads are reopened for public use. Trails shall be left in a condition such that they would not pose a hazard to users in the future.
- ▶ Biomass transported during implementation of the proposed project shall follow a haul route that is the shortest, most economical haul route feasible between the collection points and receiving facilities.
- ▶ The haul truck will be equipped with emergency fire suppression equipment and all equipment will be outfitted with spark arresters. Operations crews would be trained in and follow fire prevention and suppression measures while implementing project activities, and crews would be required to park in designated areas, away from flammable material such as dry brush or grass.

This page intentionally left blank.

3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

- 1. Project Title: Biomass Transport and Utilization Project
- 2. Lead Agency Name and Address: California Tahoe Conservancy
1061 Third Street
South Lake Tahoe, CA 96150
- 3. Contact Person and Phone Number: Joseph Harvey, Forest Operations Specialist, (530) 543-6008
- 4. Project Location: El Dorado County, California
- 5. Project Sponsor’s Name and Address: California Tahoe Conservancy (address same as above)
- 6. General Plan Designation: Multiple, please refer to Section 3.10, “Land Use and Planning”
- 7. Zoning: Multiple, please refer to Section 3.10, “Land Use and Planning”
- 8. Description of Project: Please refer to Chapter 2, “Project Description”
- 9. Surrounding Land Uses and Setting: Please refer to Chapter 2, “Project Description,” and
Section 3.10, “Land Use and Planning.”
- 10. Other public agencies whose approval is required: **None**

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this proposed project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages. Where checked below, the topic with a potentially significant impact will be addressed in an environmental impact report.

- | | | |
|---|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Hazards / Hazardous Materials | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Agriculture and Forest Resources | <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Utilities / Service Systems |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Mandatory Findings of Significance |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Population / Housing | <input checked="" type="checkbox"/> None |
| <input type="checkbox"/> Geology / Soils | <input type="checkbox"/> Public Services | <input type="checkbox"/> None with Mitigation Incorporated |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Recreation | |

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project could not have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the proposed project **COULD** have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that the proposed project **MAY** have a "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 proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name

Title

Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

3.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics.				
Except as provided in Public Resources Code Section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) 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"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>

3.1.1 Environmental Setting

As described in Section 2.1, "Project Overview," collection points identified for chipping and loading of biomass material would be cleared and constructed prior to implementing the proposed project. Collection points are located within fuels treatment areas, which are described below. Haul routes for transport of biomass material would include local and connector streets, as well as state and interstate highways (see Figure 2-5). Possible highway travel routes include:

- ▶ U.S. Highway 50 (U.S. 50) from South Lake Tahoe to the junction with State Route (SR) 49 in California;
- ▶ SR 49 along segments from the Loyalton Biomass facility to the junction with SR 89, and between the town of Auburn and the Ampine wood products facility in Sutter Creek, California;
- ▶ SR 89 along the segment from the junction with SR 49 to the junction with SR 88;
- ▶ SR 88 along the segment from the junction with SR 89 to the Ampine wood products facility in Sutter Creek, California;
- ▶ SR 193 along the segment from the junction with I-80 to the Sierra Pacific Industries Lincoln facility in Lincoln, California;
- ▶ SR 65 along the segment from the junction with I-80 to the Sierra Pacific Industries Lincoln facility in Lincoln, California; and
- ▶ I-80 from the junction with SR 89 to the junction with SR 65.

SR 89 is designated by the California Department of Transportation (Caltrans) as a state scenic highway from the El Dorado County line to post mile 27.4 at the Placer County line (Caltrans 2019).

Collection points at Meeks Creek Meadow are located west of SR 89 at Meeks Bay in El Dorado County, California in an area surrounded by rolling mountains and forest. Collection points may be visible from SR 89, and partially visible through trees from the Meeks Bay Campground, located on the east side of SR 89. There is a TRPA-designated scenic roadway travel unit (Scenic Roadway Unit 7 Meeks Bay) and a TRPA-designated scenic viewpoint (Scenic Viewpoint 7.4) adjacent to these collection points.

Collection points at South Tahoe Fuels Treatment project parcels are located within Forest Service parcels surrounding South Lake Tahoe in El Dorado County. These collection points are located in the Wildland-Urban Interface (WUI) and general forest outside the WUI. Several of the individual parcels identified for fuels treatment activities border TRPA scenic travel routes on Pioneer Trail (Scenic Roadway Unit 45 Pioneer Trail North, Scenic Roadway Unit 46 Pioneer Trail South) and SR 89 (Scenic Roadway Unit Unit 2 Camp Richardson).

The Sugar Pine Point State Park collection point is located on the west shore of Lake Tahoe, just south of Tahoma. The eastern edge of the site borders Lake Tahoe and the Park is bisected by General Creek. Sugar Pine Point State Park, including the areas to be treated, is visible from SR 89 near Tahoma within TRPA Scenic Roadway Units 7 and 8 (Meeks Bay and Sugar Pine Point). Sugar Pine Point State Park has a history of logging, but since acquisition by California State Parks (State Parks) in 1965, has been managed to reflect natural mixed conifer forest, riparian, and meadow conditions.

3.1.2 Discussion

a) Have a substantial adverse effect on a scenic vista?

Less than significant. Portions of the three fuels treatment activities are located within view of TRPA scenic roadway travel units and along SR 89, a designated state scenic highway in El Dorado County (Caltrans 2019). Portions of some of the other potential travel routes are eligible for designation as a state scenic highway, including SR 49 in Sierra County, SR 89 in Nevada and Placer counties, and SR 28 in Placer County. During implementation of the proposed project, there would be temporary activities related to chipping and loading biomass into a haul truck at collection points within the Tahoe Basin. There would be short-term, limited presence of heavy machinery and vehicles at collection points that may be visible from viewing locations, such as nearby recreational trails and residences in the neighborhoods adjacent to collection points, while chipping and loading is occurring. These impacts would be temporary and would not result in permanent changes to the visual character of the forested landscape around the loading sites. The proposed project would not involve physical alterations to the landscape of any kind, including ground disturbance or the construction of structures. Project activities would be temporary, and proposed project activities at some collection points would not be visible from roadway scenic travel units, state scenic highways, or from nearby residences. For the above reasons, implementation of the proposed project would not have a substantial adverse impact on a scenic vista, and this impact would be less than significant.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less than significant. The proposed project would not involve physical changes to the natural environment of any kind, including ground disturbance or the construction of structures. Project activities would be temporary with implementation of the proposed project. Haul trucks and other equipment would remain on existing collection points and roadways. Thus, the proposed project would not result in any physical changes that would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. This impact would be less than significant.

- c) **In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

Less than significant. As described under item (a), above, during implementation of the proposed project, there would be temporary activities related to chipping and loading biomass into a haul truck at collection points within the Tahoe Basin. There would be short-term, limited presence of heavy machinery and vehicles at collection points that may be visible from viewing locations, such as nearby recreational trails and residences in the neighborhoods adjacent to collection points while chipping and loading is occurring. These impacts would be temporary and would not result in permanent changes to the visual character of the forested landscape around the loading sites. The proposed project would not involve physical alterations of any kind, including ground disturbance or the construction of structures. For these reasons, the proposed project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings and would not conflict with applicable zoning and other regulations governing scenic quality. This impact would be less than significant.

- d) **Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

No impact. The proposed project would involve the loading and transport of forest material generated by previously approved forest thinning activities on NFS and State Parks lands within the Lake Tahoe Basin. Material would be hauled to a biomass conversion facility in Loyalton for use in electricity generation. For the duration of the proposed project, activities related to loading and removing biomass from the loading and hauling sites, including chipping and hauling material into trucks, would occur. Activities at collection points would occur during daylight hours, generally between 8:00a.m. and 5:00p.m., but hauling material may occur outside of these hours, especially during summer or peak tourist periods. Trucks would be loaded and work activities would be concluded at collection points before dark, thereby eliminating the need for additional sources of light for work activities. For these reasons, implementation of the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. There would be no impact.

3.2 AGRICULTURE AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forest Resources.				
<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.</p> <p>In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.</p> <p>Would the project:</p>				
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"/>
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"/>
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"/>
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"/>
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"/>

3.2.1 Environmental Setting

The biomass loading sites are located on undeveloped, forested NFS and State Parks lands consisting of cleared landings and roadways that are zoned Recreation and Conservation (TRPA 2020) and are not used for agriculture or

timber production. None of the loading areas are located within a timber production zone; on land designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Conservation 2020); or on land subject to a Williamson Act contract, as there are no private lands associated with the proposed project.

3.2.2 Discussion

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?

No impact. The proposed project would involve the loading and transport of forest material generated by previously approved forest thinning activities on NFS and State Parks lands within the Lake Tahoe Basin. Material would be hauled to a biomass conversion facility in Loyalton for use in electricity generation. The loading areas at the treatment sites do not include land zoned for farmland, or land subject to a Williamson Act contract. Because the proposed project would not convert or otherwise affect land designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, the proposed project would not affect these resources. There would be no impact.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

No impact. The loading and hauling sites are zoned as Conservation and Recreation. The loading and hauling sites are not zoned for agricultural uses and do not contain any Williamson Act contracts. Implementation of the proposed project would not conflict with zoning for agricultural use or conflict with an existing Williamson Act contract. There would be 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))?

No impact. The proposed project activities would take place on land that is zoned as Conservation and Recreation and is within an area predominately composed of mixed conifer forest. Loading sites do not contain vegetation but would, in some cases as part of the three fuels treatment activities, be decommissioned following project activities and returned to the mixed conifer landscape and managed according to existing uses. Decommissioning activities have been approved under prior environmental review. For these reasons, the proposed project would result in no impact related to conflicts with the zoning of forest land or timberland. There would be no impact.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No impact. As described under item (c), above, the proposed project activities would take place on land that is zoned as Conservation and Recreation and is within an area predominately composed of mixed conifer forest. Loading sites do not contain vegetation but would, in some cases as part of the three fuels treatment activities, be decommissioned following project activities and returned to the mixed conifer landscape and managed according to existing uses. Decommissioning activities have been approved under prior environmental review; therefore, implementation of the proposed project would result in no impact related to conversion of forest land. There would be 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?

No impact. Implementation of the proposed project would not involve other changes that could result in conversion of farmland or forest land to non-agricultural or non-forest use. As described in the discussions under items (a) through (c), above, implementation of the proposed project would result in no impact related to conversion of agricultural or forest land. There would be no impact.

3.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations.				
Are significance criteria established by the applicable air district available to rely on for significance determinations?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>

3.3.1 Environmental Setting

The Lake Tahoe Air Basin (LTAB) comprises portions of El Dorado and Placer counties on the California side of the Lake Tahoe Basin, and Washoe County, Douglas County, and the Carson City Rural District on the Nevada side. The LTAB is currently designated as nonattainment (i.e. is not in compliance) with respect to the California Ambient Air Quality Standard (CAAQS) for respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM₁₀) (CARB 2018). The three fuels treatment sites and collection points from which biomass would be offhauled are located in El Dorado County and are under the jurisdiction of the El Dorado County Air Quality Management District (EDCAQMD). The Meeks Creek Meadow Project treatment unit is adjacent to urbanized development, developed recreation sites, an area of concentrated public use, and the northeastern edge of Desolation Wilderness. The South Tahoe Fuels Treatment Project parcels are dispersed across NFS lands within South Lake Tahoe in El Dorado County. Sugar Pine Point State Park is located on the west shore of Lake Tahoe just south of Tahoma.

Slash generated by fuels treatments would be chipped, truck-loaded, and in part hauled to various biomass-to-energy facilities for use as fuel in the production of electricity. These facilities include Rio Bravo Rocklin and Sierra Pacific Industries, located in Lincoln, California, and Loyalton Biomass, located in Loyalton, California. The proposed project also includes the potential transport and utilization of biomass for use as: home fuel by the Washoe Tribe of California and Nevada; pulp for use in the creation of wood products at the Ampine wood products facility in Sutter Creek, California; and as chip mulch for site restoration at Meeks Creek Meadow.

Air quality within El Dorado County, the collection points are located, is regulated by the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) at the federal and state levels, respectively, as

well as locally by EDCAQMD. EDCAQMD seeks to improve air quality conditions in El Dorado County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. These clean air strategies include the development of programs for the attainment and maintenance of the CAAQS and the National Ambient Air Quality Standards (NAAQS), adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. EDCAQMD also inspects stationary sources, respond to citizen complaints, monitor ambient air quality and meteorological conditions, and implement other programs and regulations required by the federal Clean Air Act (CAA), federal Clean Air Act Amendments of 1990 (CAAA), and the California Clean Air Act (CCAA).

Portions of the transported biomass would be hauled to the Loyaltan biomass conversion facility, located approximately 49 miles north of the LTAB (Sierra County), and the Ampine wood products facility in Sutter Creek, California (Amador County), approximately 85 miles to the southwest of the LTAB. Both of these facilities are located in counties within the Mountain Counties Air Basin (MCAB). Amador County is designated as “nonattainment” while Sierra County is designated as “unclassified” with respect to their NAAQS and CAAQS attainment status for ozone. The Rio Bravo Rocklin and Sierra Pacific Industries are located approximately 100 miles to the west of the LTAB, in Lincoln, California (Placer County), which is part of the Sacramento Valley Air Basin (SVAB). The status of Placer County is designated as “nonattainment” with respect to its NAAQS and CAAQS attainment status for ozone. Finally, some biomass, in the form of firewood for use in home heating, would be transported to the Washoe Tribe headquarters, located approximately 45 miles to the east, in Garnerville, Nevada. The 23-mile California segment of the haul route to this location passes through the El Dorado County portion of the LTAB, which is in nonattainment with respect to the CAAQS for PM₁₀ (CARB 2018). The 22-mile Nevada portion of this route passes through Douglas County, which is in attainment with the NAAQS for all criteria pollutants.

AMBIENT AIR QUALITY

Criteria Air Pollutants

As required by the federal CAA, EPA has identified NAAQS for six criteria air pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, respirable and fine particulate matter (PM₁₀ and PM_{2.5}, which are particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively), and lead. The State of California has also established CAAQS for these six pollutants as well as sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. NAAQS and CAAQS were established to protect the public with a margin of safety from adverse health impacts caused by exposure to air pollution. A brief description of the source and health effects of criteria air pollutants is provided below in Table 3-1.

Table 3-1 Criteria Air Pollutants

Pollutant	Sources	Effects
Ozone	Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG, also sometimes referred to as volatile organic compounds by some regulating agencies) and nitrogen oxides (NO _x). The main sources of ROG and NO _x , often referred to as ozone precursors, are products of combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels.	Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.
Carbon monoxide (CO)	CO is usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicle engines; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration.	Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal.
Particulate matter	Some sources of particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect.	Scientific studies have suggested links between fine particulate matter and numerous health problems, including asthma, bronchitis, and acute and chronic respiratory symptoms, such as shortness of breath and

Pollutant	Sources	Effects
		painful breathing. Recent studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air.
Nitrogen dioxide (NO ₂)	NO ₂ is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO ₂ .	Aside from its contribution to ozone formation, NO ₂ can increase the risk of acute and chronic respiratory disease and reduce visibility.
Sulfur dioxide (SO ₂)	SO ₂ is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel.	SO ₂ is also a precursor to the formation of particulate matter, atmospheric sulfate, and atmospheric sulfuric acid formation that could precipitate downwind as acid rain.
Lead	Leaded gasoline, lead-based paint, smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere, with lead levels in the air decreasing substantially since leaded gasoline was eliminated in the United States.	Lead has a range of adverse neurotoxic health effects.

Source: EPA 2019

Attainment Area Designations

The CAA and the CCAA require all areas of California to be classified as attainment, nonattainment, or unclassified with respect to the NAAQS and CAAQS. Under the CAA and the CCAA, both CARB and EPA use ambient air quality monitoring data to designate the attainment status of an Air basin relative to the CAAQS and NAAQS for each criteria air pollutant. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are "nonattainment," "attainment," and "unclassified." "Unclassified" is used in an area that cannot be classified based on available information as meeting or not meeting the standards. Attainment designations for the year 2016 through 2018 in the LTAB are shown in Table 3-2 for each criteria pollutant.

Table 3-2 Ambient Air Quality Standards and Designations for the Lake Tahoe Air Basin

Pollutant	Averaging Time	California Standards ^{2,3}	California Attainment Status ⁴	National ¹ Primary ³	National ¹ Attainment Status ⁵
Ozone	1-hour	0.09 ppm (180 µg/m ³)	Attainment	–	–
	8-hour	0.070 ppm (137 µg/m ³)	Attainment	0.070 ppm (137 µg/m ³)	Attainment
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m ³)	Attainment	35 ppm (40 mg/m ³)	Attainment (Maintenance)
	8-hour (Lake Tahoe)	6 ppm (7 mg/m ³)	Attainment	9 ppm (10 mg/m ³)	
Nitrogen dioxide (NO ₂)	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Attainment	0.053 ppm (100 µg/m ³)	Attainment
	1-hour	0.18 ppm (339 µg/m ³)	Attainment	0.100 ppm (188 µg/m ³)	Attainment
Respirable particulate matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	Nonattainment	–	–
	24-hour	50 µg/m ³	Nonattainment	150 µg/m ³	Attainment
Fine particulate matter (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	Attainment	12.0 µg/m ³	Attainment
	24-hour	–	–	35 µg/m ³	Attainment
Visibility-reducing particle matter	8-hour	Extinction coefficient of 0.07 per kilometer — visibility of 30 mi or more	Unclassified	–	–

Notes: µg/m³ = micrograms per cubic meter; ppm = parts per million; "–" = not applicable

¹ National standards (other than ozone, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM₁₀ 24-hour standard is attained when 99 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

than the standard. The PM_{2.5} 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact EPA for further clarification and current federal policies.

- ² California standards for ozone, CO (except in the Lake Tahoe Air Basin), SO₂ (1- and 24-hour), NO₂, PM, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards (CAAQS) are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- ³ Concentration expressed first in units in which it was promulgated [i.e., parts per million (ppm) or micrograms per cubic meter (µg/m³)]. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas. Secondary national standards are also available from EPA.
- ⁴ Unclassified (U): pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
 Attainment (A): pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a 3-year period.
 Nonattainment (N): a pollutant is designated nonattainment if there was a least one violation of a state standard for that pollutant in the area. Non-attainment designations for ozone are classified as marginal, serious, severe, or extreme depending on the magnitude of the highest 8-Hour ozone design value at a monitoring site in a nonattainment area.
 Nonattainment/Transitional (NT): is a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the standard for that pollutant.
- ⁵ Nonattainment (N): any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.
 Attainment (A): any area that meets the national primary or secondary ambient air quality standard for the pollutant.
 Unclassifiable (U): any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.
 Maintenance (M): any area previously designated nonattainment pursuant to the CAAA of 1990 and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan under Section 175A of the CAA, as amended.

Source: CARB 2016, CARB 2018, EPA 2019; data compiled by Ascent Environmental in 2020

TOXIC AIR CONTAMINANTS

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects (i.e., injury or illness). At the federal level, these airborne substances are referred to as Hazardous Air Pollutants. Diesel particulate matter (diesel PM) is a TAC, based on evidence demonstrating carcinogenesis in humans. The exhaust from diesel engines includes dozens of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and diesel-fueled heavy machinery are among the primary sources of diesel PM emissions. Although diesel PM is emitted by diesel-powered internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether the engine includes an emissions control system.

Another notable TAC is asbestos, a fibrous mineral that is naturally occurring in ultramafic rock and used as a processed component of building materials. When rock containing asbestos is broken or crushed, asbestos fibers may be released and become airborne. Exposure to airborne asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs). The project is not in a region where naturally occurring asbestos is likely to be present (Van Gosen and Clinkenbeard 2011).

Smoke from wildfires and prescribed burns also contains TACs such as aldehydes (including formaldehyde and acrolein) and organic compounds such as polycyclic aromatic hydrocarbons (PAHs) and benzene. Aldehydes are volatile organic compounds that are detectable by their distinctive odor. Formaldehyde and acrolein are the two most potent aldehydes found in smoke that cause eye and respiratory irritation and potentially exacerbate asthma. Chronic exposure to formaldehyde is associated with nasal cancer (NWCG 2018). PAHs and benzene are also carcinogenic, and long-term exposure could result in elevated cancer risk.

LOCAL PLANS, POLICIES, LAWS, AND REGULATIONS

EDCAQMD and PCAPCD have developed air quality management plans to attain and maintain the CAAQS and NAAQS for ozone, PM₁₀, and PM_{2.5} within the LTAB. The air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control methods have worked, and to show how air pollution will be reduced. Because ozone is a secondary pollutant that is generated from a reaction of reactive organic gases (ROG) and NO_x in the presence of sunlight, District activities include measures to reduce emissions of ROG and NO_x in portions of El Dorado and Placer counties within the LTAB.

El Dorado County Air Quality Management District

EDCAQMD works to improve air quality and quality of life for El Dorado County residents by adopting and enforcing regulations to control emissions from all sources other than motor vehicles, including agricultural/open burning, in the LTAB. EDCAQMD recommends a mass emission threshold of 82 pounds per day (lb/day) for evaluating whether the ROG and NO_x emissions associated with a project would inhibit its ability to maintain the NAAQS and CAAQS for ozone. EDCAQMD considers these 82 lb/day thresholds to represent the allowable incremental contribution of project-related activity while still progressing toward overall attainment of the CAAQS and NAAQS in El Dorado County and in the LTAB. These efforts to improve air quality by EDCAQMD will ultimately help California meet the goals of its State Implementation Plan (SIP) by achieving and maintaining attainment status in the LTAB.

Placer County Air Pollution Control District

PCAPCD works to improve air quality and quality of life for Placer County residents by adopting and enforcing regulations to control emissions from all sources other than motor vehicles, including agricultural/open burning, in the LTAB. As part of its efforts to attain and maintain CAAQS and NAAQS, PCAPCD has also adopted thresholds of significance for evaluating proposed projects. PCAPCD's threshold for project-generated emissions of ROG, NO_x, and PM₁₀ is 82 lb/day (PCAPCD 2017:21). PCAPCD considers these thresholds to represent the allowable incremental contribution of project-related activity while still progressing toward overall attainment within Placer County. These efforts to improve air quality by PCAPCD will ultimately help California meet the goals of its SIP by achieving and maintaining attainment status in the LTAB.

Northern Sierra Air Quality Management District

The Northern Sierra Air Quality Management District (NSAQMD), the regulatory agency with jurisdiction over the Sierra County portion of MCAB, grants air quality permits for stationary source operation. The Loylton biomass conversion facility is a stationary source within MCAB that complies with Condition 26.B.1 of its Permit to Operate (No. 88-19-01) issued by NSAQMD, which allows for emissions of up to 50.75 pounds per hour (lb/hr) of NO_x.

Amador Air District

The Amador Air District (AAD) is the regulatory agency with jurisdiction over Amador County within the MCAB. AAD helps local businesses comply with air quality standards set by EPA and CARB as well as granting air quality permits for stationary source operation. The Ampine wood products facility is within the jurisdiction of AAD.

3.3.2 Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than significant. Airborne emissions associated with the proposed project would be generated by processing and loading equipment and haul trucks used to transport biomass to receiving facilities located in the MCAB and SVAB as well as by combustion of biomass.

A region's air quality attainment plan is developed using emission inventories based primarily on projected population growth and vehicle miles traveled (VMT) for the region that are determined, in part, based on the planned growth identified in regional and community plans. Therefore, projects that would result in increases in population or employment growth beyond that projected in regional or community plans could result in long-term increases in

VMT above that accounted for in the attainment plan, further resulting in mobile-source emissions that could conflict with a region’s air quality planning efforts. Increases in VMT beyond that projected in area plans generally would be result in a significant adverse incremental effect on the region’s ability to attain or maintain the CAAQS and NAAQS.

The proposed project would not result in any new long-term employment opportunities or new housing, and it would not change the amount of development projected in the LTAB. Therefore, it would be consistent with the population growth and VMT projections used in EDCAQMD’s air quality planning efforts. Also, the project would not result in any new stationary sources of emissions in the LTAB. Moreover, removing biomass from the loading and hauling sites would improve regional air quality by reducing emissions of criteria air pollutants and precursors generated during the open pile burning of biomass waste. Thus, implementation of the proposed project would not conflict with or obstruct implementation of any air quality planning efforts. As a result, this impact would be less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

Less than significant. By its very nature, regional air pollution is largely a cumulative impact, and past, present, and future development projects contribute to the region’s adverse air quality impacts. No single project results in substantial enough emissions to, by itself, result in an entire air basin failing to attain the NAAQS or CAAQS and receiving a nonattainment status designation. Instead, a project’s individual emissions can contribute to cumulatively significant adverse air quality impacts. When developing daily emissions thresholds of significance for air pollutants, EDCAQMD considered the emission levels for which a project’s individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in, or contributing to, a significant adverse impact to the region’s existing air quality conditions.

Proposed project-generated criteria pollutant emissions are summarized in Tables 3-3a and 3-3b and discussed below. A flexible approach to emissions estimates was used by assuming that all biomass utilization would occur at a biomass energy facility in Lincoln, California, which reflects both the maximum amount of utilization emissions, as well as the farthest possible haul distance that would reasonably occur with implementation of the proposed project. These emissions are included in the SVAB portion of the tables below.

Table 3-3a Short-term Emissions of Criteria Air Pollutants – South Tahoe Project and Meeks Creek Meadow Project Treatment Units

Emissions Source	ROG (lb/day)	NO _x (lb/day)	PM ₁₀ (lb/day)	PM _{2.5} (lb/day)
Lake Tahoe Air Basin				
Worker Trips	0.14	<0.1	<0.1	<0.1
Truck Loading Equipment	10.3	10.7	0.36	0.32
Haul Truck Fugitive Dust (unpaved roads)	--	--	27.7	2.8
Haul Truck Exhaust	0.18	2.1	0.11	0.07
LTAB Total	10.6	12.8	28.1	3.2
EDCAQMD Daily Threshold	82	82	--	--
Mountain Counties Air Basin				
Haul Truck Exhaust	1.2	13.6	0.70	0.48
MCAB Total	1.2	13.6	0.70	0.48
Great Basin Valleys Air Basin				
Haul Truck Exhaust	0.10	1.2	<0.1	<0.1
GBVAB Total	0.10	1.2	<0.1	<0.1

Emissions Source	ROG (lb/day)	NO _x (lb/day)	PM ₁₀ (lb/day)	PM _{2.5} (lb/day)
Sacramento Valley Air Basin				
Haul Truck Exhaust	0.27	3.1	0.16	0.11
Biomass Power Plant	11.0	157	11.5	--
SVAB Total	11.3	160	11.6	0.11
TOTAL EMISSIONS	23	188	41	3.8

Note: lb/day = pounds per day; LTAB = Lake Tahoe Air Basin; MCAB = Mountain Counties Air Basin; GBVAB = Great Basin Valleys Air Basin; SVAB = Sacramento Valley Air Basin

See Appendix A for detailed modeling parameters and results.

Source: Modeling conducted by Ascent Environmental in 2020.

Table 3-3b Short-term Emissions of Criteria Air Pollutants – Sugar Pine Point Project Treatment Unit

Emissions Source	ROG (lb/day)	NO _x (lb/day)	PM ₁₀ (lb/day)	PM _{2.5} (lb/day)
Lake Tahoe Air Basin				
Worker Trips	0.14	<0.1	<0.1	<0.1
Truck Loading Equipment	10.3	10.7	0.36	0.32
Haul Truck Fugitive Dust (unpaved roads)	--	--	23.0	2.3
Haul Truck Exhaust	0.15	1.7	<0.1	<0.1
LTAB Total	10.6	12.5	23.5	2.7
EDCAQMD Daily Threshold	82	82	--	--
Mountain Counties Air Basin				
Haul Truck Exhaust	1.0	11.3	0.58	0.40
MCAB Total	1.0	11.3	0.58	0.40
Great Basin Valleys Air Basin				
Haul Truck Exhaust	<0.1	1.0	<0.1	<0.1
GBVAB Total	<0.1	1.0	<0.1	<0.1
Sacramento Valley Air Basin				
Haul Truck Exhaust	0.23	2.6	0.13	<0.1
Biomass Power Plant	10.5	150	10.9	--
SVAB Total	10.7	153	11.1	<0.1
TOTAL EMISSIONS	22	177	35	3.2

Note: lb/day = pounds per day; LTAB = Lake Tahoe Air Basin; MCAB = Mountain Counties Air Basin; GBVAB = Great Basin Valleys Air Basin; SVAB = Sacramento Valley Air Basin

See Appendix A for detailed modeling parameters and results.

Source: Modeling conducted by Ascent Environmental in 2020

As shown in Tables 3-3a and 3-3b, the proposed project would not result in an increase in ROG or NO_x emissions in the LTAB that would exceed EDCAQMD's recommended mass emission threshold of 82 lb/day. Because the majority of the haul routes are outside the LTAB, passing through Mountain Counties, Sacramento Valley, and Great Basin Valleys Air Basins, emissions in the other air basins are not included in the LTAB total. The rest of the proposed project-related emissions would be associated with truck emissions along portions of haul routes located outside of the LTAB and from the generation of electricity at the biomass conversion facilities, located in MCAB and SVAB.

The Loyalton biomass conversion facility is a stationary source that complies with Condition 26.B.1 of its Permit to Operate (No. 88-19-01) issued by NSAQMD. This permit allows for emissions of up to 50.75 lb/hr of NO_x. Because the facility would continue to comply with permitted limit for NO_x, and because the MCAB is designated as "unclassified" with respect to the NAAQS and CAAQS for ozone in Sierra County, its emissions would not result in a cumulatively considerable contribution to air quality. The biomass energy generation facilities located in Lincoln, California, must similarly comply with stationary source air quality permits and thus emissions of NO_x would not result in a cumulatively considerable contribution to air quality. Moreover, these emissions could occur if the biomass plants received biomass feedstock from another source and would, therefore, not be due solely to the proposed project. For these reasons, this impact would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant. The proposed project would result in the short-term generation of diesel PM, which is a TAC, and could also increase localized concentrations of criteria air pollutants, which may affect sensitive receptors. Sensitive receptors are particularly susceptible to the health effects of air pollutants and include the elderly, young children and infants, those with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease, and those with existing environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases. Locations that would be considered sensitive receptors include schools, daycare facilities, elderly care establishments, medical facilities, and other areas that are populated with people who are more vulnerable to the effects of poor air quality.

The closest sensitive receptors to the project loading sites would be single-family homes in neighborhoods adjacent to fuel treatment sites, and the Meeks Bay Campground in Meeks Bay. Additionally, schools located near the treatment site loading areas include Sierra House Elementary School, approximately 0.4-mile from the nearest South Tahoe Project treatment unit; Bijou Community School, approximately 0.7-mile northwest of the South Tahoe Project treatment unit and Loyalton High School, approximately 0.6-mile from the Loyalton biomass conversion facility. Haul routes used to transport biomass lie along SR 88, SR 89, SR 65, SR 193, SR 49, and I-80, which travel through relatively remote areas of the Sierra Nevada mountains and foothills, far from sensitive receptors.

Toxic Air Contaminants

The proposed project would result in short-term diesel PM emissions from mechanical equipment and haul trucks. The dose to which receptors are exposed is the primary factor used to determine health risk and is a function of the concentration of a substance to which a receptor is exposed and duration of exposure. Dose is positively correlated with time, meaning that a longer exposure period would result in higher exposure levels at nearby receptors. 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- or 30-year period, for chronic residential and work exposures, respectively. However, such assessments should be limited to the period/duration of activities that generate TAC emissions (OEHHA 2015). Biomass hauling would occur over a 13-week period (June to August) for two seasons, which is a short exposure period relative to the 30- or 70-year exposure timeframe recommended for health risk assessments. In addition, studies show that diesel PM is highly dispersive and that concentrations of diesel PM decline with distance from the source (e.g., 500 feet from a highway, the concentration of diesel PM decreases by 70 percent) (Roorda-Knape et al. 1999 and Zhu et al. 2002, as cited in CARB 2005:9). Therefore, considering the distance of biomass piles from nearby receptors, highly dispersive properties of diesel PM, and relatively short duration of hauling activities associated with this project, sensitive receptors would not be exposed to an incremental increase in cancer risk greater than 10 in one million, or a Hazard Index greater than 1.0.

Moreover, an emerging set of research on diesel PM generated by roadway traffic (i.e., onroad vehicles) indicates that vegetation removes particulates from the air. It does so through the direct absorption of gaseous and semi-volatile aerosols through leaf stomata and by dissolving water soluble pollutants on moist leaf surfaces (Islam et al. 2012; Tong 2016). The research demonstrates that the presence of trees between vehicles and receptors further reduces potential exposure to diesel PM along roadways. Thus, diesel PM emitted by haul trucks and the offroad machinery used to load them would experience the same mitigation, because stands of trees near the heavily forested fuels treatment sites would provide the same buffering condition identified in the research.

Localized Concentrations of Criteria Air Pollutants

In addition to regional air quality concerns, emissions from treatment activities could result in localized concentrations of some criteria air pollutants that exceed NAAQS and CAAQS, exposing nearby receptors to associated adverse health effects. This discussion focuses on the formation of ground-level ozone from the oxidation of ROG and NO_x, as well as fugitive PM₁₀ and PM_{2.5} dust emissions from travel on unpaved roads and other ground-disturbing activities.

Ozone

Because ozone is a secondary pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NO_x, and thus a regional pollutant, there is no potential for the proposed project to result in localized exceedances of ozone near loading and hauling sites or along associated vehicle travel routes. Current air quality models cannot determine the locations of, or the specific concentrations of, ozone derived from ROG and NO_x precursor emissions because of the complex physical factors that contribute to the chemical reactions involved in converting precursors to ground-level ozone (i.e., sun, temperature, wind, topography). Any meaningfully accurate prediction of site-specific ozone concentrations using currently available ozone models would require precursor emissions to be sufficiently substantial as to change the regional inventory of airborne pollutants, which would not occur with the loading and hauling activities of this project. Therefore, such quantitative predictions of local ozone emissions resulting from the current project would not be scientifically possible.

As discussed under item (b), above, EDCAQMD recommends a mass emission threshold of 82 lb/day for ROG and NO_x when determining whether a project's contribution of ozone precursor emissions to the ozone nonattainment condition in the LTAB would be considerable. This analysis explains that neither 82-lb/day threshold would be exceeded within the LTAB. This analysis also explains that most of the project-related emissions of ROG and NO_x in the MCAB and SVAB would be subject to stationary source permitting requirements.

Fugitive PM₁₀ and PM_{2.5} Dust

Haul trucks traveling on unpaved forest roads that connect hauling and loading sites to paved haul routes, over distances that would not exceed 2 miles each way, would generate fugitive road dust emissions of PM₁₀ and PM_{2.5}. Depending on the number of vehicle trips, the proximity of local residents, and the silt content of soil, travel on unpaved roads can potentially result in, or contribute to, an exceedance of the NAAQS and/or CAAQS for PM₁₀ and PM_{2.5} at nearby locations. As summarized in Table 3-1, human exposure to fugitive dust emissions may cause acute and chronic health impacts including breathing and respiratory symptoms, premature death, and carcinogenesis. However, given the remote location of the hauling and loading sites and unpaved road segments, which would only be used by haul trucks accessing the treatment sites, sensitive receptors would not be exposed to excessive concentrations of fugitive PM₁₀ and PM_{2.5} dust emissions. Additionally, any fugitive PM emissions generated would be subject to removal by surrounding vegetation, a process discussed above for TACs, and concentrations of any fugitive PM₁₀ and PM_{2.5} escaping forested areas would be greatly diminished.

Summary

Project-generated emissions of diesel PM would not expose sensitive receptors to an incremental increase in cancer risk greater than 10 in one million, or a Hazard Index greater than 1.0. Additionally, any ozone precursors or fugitive PM dust emissions generated by truck loading equipment, haul trucks, or travel along unpaved segments of haul routes would not result in localized concentrations of these pollutants that exceed any CAAQS or NAAQS at sensitive receptor sites. Therefore, this impact would be less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than significant. The proposed project would not introduce new, permanent odor-generating facilities, nor would it place new sensitive receptors close to existing sources of odors. Minor odors from the use of onsite diesel-powered equipment would be intermittent, temporary, and would dissipate rapidly from the source with an increase in distance. As a result, this impact would be less than significant.

3.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources.				
Would the project:				
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 (CDFW) or the U.S. Fish and Wildlife Service (USFWS)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>
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"/>

3.4.1 Environmental Setting

As described in Section 2.4.1, "Collection Points," collection points associated with the proposed project (in the form of landings) would be cleared, graded, and fully implemented prior to the start of the proposed project. As such, these areas would contain minimal vegetation and wildlife species, if any, and therefore would not have high-quality or suitable habitat within them. The collection point at Sugar Pine Point State Park is an existing, paved site that acts as the main collection point for all slash generated by State Parks forest fuels thinning treatment activities in the Tahoe Basin (Figure 2-2). Other collection points would consist of cleared and graded landings within Meeks Creek Meadow (Figure 2-3) and within Forest Service parcels in the South Lake Tahoe area (Figure 2-4). Despite the lack of high-quality or suitable habitat immediately within collection points, adjacent areas are forested and contain an abundance of vegetation and a variety of species habitats. These adjacent areas are typical of the Lake Tahoe Basin,

consisting of stand of mixed conifer fir and pine species. There are meadow systems present in some areas, containing a diverse array of grass species, forbs, and wildlife within some of the fuels treatment, and hardwood stands comprised of alder, willow, and aspen. These areas are home to many mammal and bird species with fewer reptiles and amphibians, all typical of high elevations in the Sierra Nevada mountain range. Specific biological resources in the vicinity of these collection points are described in more detail below.

Collection points near Meeks Creek Meadow occur within the footprint of a riparian meadow ecosystem bracketed on both sides by mountainous terrain and forest. Previous forest management and fire suppression practices have resulted in conifer encroachment at the meadow, creating of pockets of upland habitat within the meadow, and some loss of native meadow habitat and vegetation. LTBMU has identified several species of interest located or potentially located in Meeks Meadow or the immediate area: great gray owl (*Strix nebulosi*), North American wolverine (*Gulo gulo luscus*), northern goshawk (*Accipiter gentilis*), willow flycatcher (*Empidonax traillii*), bald eagle (*Haliaeetus leucocephalus*), California spotted owl (*Strix occidentalis occidentalis*), Pacific marten (*Martes caurina*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), fringed myotis (*Myotis thysanodes*), Western bumble bee (*Bombus occidentalis*), Great Basin rams-horn (*Helisoma newberryi newberryi*), Sierra Nevada yellow-legged frog (*Rana sierra*), Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*), Lahontan lake tui chub (*Gila bicolor pectinifer*), and marsh scullcap (*Scutellaria galericulata*).

Collection points associated with the South Tahoe Fuels Treatment project area are located within Forest Service parcels that host meadow edges, riparian corridors, and forest stands of Jeffrey pine, mixed conifer, lodgepole pine, whitebark pine, and aspen. Forest conditions do not reflect natural conditions due to fire suppression activities, urban development, and past forest management practices such as intensive logging in the area. This has resulted in forest stands with low wildfire resiliency and a high density of small-diameter trees. Habitat quality at these sites is low, and as such there is very low potential for threatened, endangered, or special status species habitat utilization of the South Tahoe Project treatment units.

The collection point at Sugar Pine Point State Park is located in an area of relatively high disturbance and human activity within the park. The site is paved, and is accessible by a paved road. However, Sugar Pine Point State Park more broadly is home to mixed conifer forest and General Creek, which drains most of the park. The riparian zone along General Creek is ecologically sensitive, and plant communities (wet and dry meadows, riparian aspen forests, and riparian alder thickets) show high species diversity.

3.4.2 Discussion

- 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 CDFW or USFWS?**

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities for use as fuel in bioenergy generation, as raw material for wood products, or for use as home fuel for the Washoe Tribe. No ground-disturbing activities would be required to implement the project, as the proposed project is limited to chipping, loading, and hauling of material. Haul trucks and other vehicles would travel on existing, or previously implemented roadways. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader.

The proposed project does not include development of collection points; these sites would be developed prior to implementation of the proposed project following resource protection measures (RPMs) to avoid or minimize potential effects on biological resources. Many of these RPMs would assist in avoiding adverse effects on biological resources during implementation of the proposed project; for example, landings within the Meeks Creek Meadow and within the South Tahoe Fuels Treatment Project parcels are required to be located outside of stream environment zones (SEZs; Lahontan Regional Water Quality Control Board [Lahontan Water Board] 2019:46-47; USDA

2018:16-26). Additionally, project design features and construction controls would require that prior to beginning work at a collection point a qualified biologist would conduct a nesting bird and wildlife survey. Based on the results of the survey, the biologist may limit work at the collection point for the protection of any identified species. Crews would be trained to identify any roosting bird of prey, or any nesting wildlife species, and project work would cease in the vicinity of a newly discovered nest, den, or wildlife habitation site pending review by the biologist.

Due to the limited scope of the proposed project, the limited locations within existing landings where project activities would take place, the temporary nature of the project, and with the implementation of construction controls that require surveying, monitoring, and protection for biological resources, any potential adverse impact on individuals or habitat for any species would be limited. For the above reasons, impacts to any species identified as a candidate, sensitive, or special-status species from the proposed project would be less than significant.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS?

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities locations for use as fuel in bioenergy generation, as raw material for wood products, or for use as home fuel for the Washoe Tribe. No ground-disturbing activities would be required to implement the project, as the proposed project is limited to chipping, loading, and hauling of material. Haul trucks and other vehicles would travel on existing or previously implemented roadways. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader. Collection points where project activities would occur would be implemented prior to the start of the proposed project.

While the proposed project does not include development of collection points, such sites would be developed prior to implementation of the proposed project following RPMs intended to avoid or minimize potential impacts on biological resources. Many of these RPMs would assist in avoiding adverse effects on biological resources during implementation of the proposed project; for example, landings within Meeks Creek Meadow and within the South Tahoe Fuels Treatment Project parcels are required to be located outside of stream environment zones (SEZs; Lahontan Regional Water Quality Control Board [Lahontan Water Board] 2019:46-47; USDA 2018:16-26). Additionally, no sensitive natural communities have been identified within Meeks Creek Meadow (Lahontan Water Board 2019:88). The South Tahoe Fuels Treatment project contains RPMs requiring that prior to implementation, if surveys have not been conducted in the last five years, surveys would be conducted in suitable habitats for threatened, endangered, proposed, candidate, sensitive, and watch list botanical species in the project area and any such species and its habitat would be flagged and avoided with an appropriate avoidance buffer to that species; and before implementation, fens (special habitat) would be identified on project maps and flagged with a 25-foot avoidance buffer (USDA 2018:24-25). The collection point at Sugar Pine Point State Park is paved, and does therefore not contain riparian habitat or sensitive natural communities. As such, collection points would not be located in riparian areas or within sensitive natural communities, and would therefore have minimal potential to impact such resources.

For the reasons described above, the proposed project would not result in any substantial adverse impacts on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations or by CDFW or USFWS. This impact would be less than significant.

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?

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities locations for use as fuel in bioenergy generation, as raw material for

wood products, or for use as home fuel for the Washoe Tribe. No ground-disturbing activities would be required to implement the project, as the proposed project is limited to chipping, loading, and hauling of material. Haul trucks and other vehicles would travel on existing or previously implemented roadways. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader. Collection points where project activities would occur would be implemented prior to the start of the proposed project. These project activities do not involve the direct removal, filling, or hydrologic interruption of wetlands, riparian zones, or aquatic features of any kind. Additionally, there are no state or federally protected wetlands within the existing collection point at Sugar Pine Point State Park, and collection points within the South Tahoe Fuels parcels and Meeks Creek Meadow that would be developed prior to implementation of the proposed project would not be placed within state or federally protected wetlands. Landings developed within Meeks Creek Meadow would be situated outside of meadow habitats within upland mixed conifer forest (Lahontan Water Board 2019:56). Consequently, the loading, chipping, and hauling of biomass that would be carried out with implementation of the proposed project would not result in a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrologic interruption, or other means. This impact would be less than significant.

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?

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities locations for use as fuel in bioenergy generation, as raw material for wood products, or for use as home fuel for the Washoe Tribe. No ground-disturbing activities would be required to implement the project, as the proposed project is limited to chipping, loading, and hauling of material. Haul trucks and other vehicles would travel on existing or previously implemented roadways. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader.

Collection points where project activities would occur would be implemented prior to the start of the proposed project. These sites would be relatively small areas (i.e., 1 to 3 acres) and use of those sites would be temporary. As described above, these sites would contain minimal vegetation and wildlife species, if any, and therefore would not have high-quality or suitable habitat within them for native resident or migratory species of any kind. Additionally, project design features and construction controls would require that prior to beginning work at a collection point a qualified biologist would conduct a nesting bird and wildlife survey. Based on the results of the survey, the biologist may limit work at the collection point for the protection of any identified species. Crews would be trained to identify any roosting bird of prey, or any nesting wildlife species, and project work would cease in the vicinity of a newly discovered nest, den, or wildlife habitation site pending review by the biologist.

Due to the limited scope of the proposed project, the limited locations within existing landings where project activities would take place, the temporary nature of the project, and with the implementation of construction controls that require surveys, monitoring, and protection for biological resources, the project would not have an adverse impact related to 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. This impact would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No impact. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities locations for use as fuel in bioenergy generation, as raw material for wood products, or for use as home fuel for the Washoe Tribe. No ground-disturbing activities would be required to

implement the project, as the proposed project is limited to chipping, loading, and hauling of material. Haul trucks and other vehicles would travel on existing or previously implemented roadways. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader.

The proposed project activities described above do not include ground disturbance, the removal of vegetation or trees, or any other activities that would result in adverse effects on biological resources as described herein. Additionally, project design features and construction controls would require that prior to beginning work at a collection point a qualified biologist would conduct a nesting bird and wildlife survey. Based on the results of the survey, the biologist may limit work at the collection point for the protection of any identified species. Crews would be trained to identify any roosting bird of prey, or any nesting wildlife species, and project work would cease in the vicinity of a newly discovered nest, den, or wildlife habitation site pending review by the biologist. These measures are consistent with local plans and ordinances related to conservation of natural resources. Consequently, there would be no impact on local policies or ordinances protecting biological resources.

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?

No impact. The proposed project is not located within an area covered under an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state conservation plan. Therefore, proposed project implementation would not conflict with the provisions of an adopted conservation plan and would result in no impact.

3.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources.				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.5.1 Environmental Setting

As described in Section 2.4.1, "Collection Points," collection points associated with the proposed project (in the form of landings) would be cleared, graded, and fully implemented prior to the start of the proposed project. As such, these areas are disturbed sites.

The existing slash pile site at Sugar Pine Point State Park is currently paved. Under the proposed project, landings and roadways located within Meeks Creek Meadow and landings identified as central collection points within the South Tahoe Fuels Treatment Project parcels will be established prior to initiation of the proposed project. In accordance with RPMs developed for the Meeks Creek Meadow Restoration Project and the South Tahoe Fuels Treatment Project, any previously unknown cultural resources would be flagged and avoided. As such, proposed landings and roadways that conflict with the presence of newly identified cultural resources would be relocated and are not part of the currently proposed project.

3.5.2 Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

No impact. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities locations for use as fuel in bioenergy generation, as raw material for wood products, or for use as home fuel for the Washoe Tribe. No ground-disturbing activities would be required to implement the project, as the proposed project is limited to chipping, loading, and hauling of material. Haul trucks and other vehicles would travel on existing, or previously implemented roadways. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader.

Because the loading and hauling sites where the proposed chipping and loading would occur are preexisting or would be cleared as part of the three fuels treatment activities previously described, no ground-disturbing activities would occur as part of the proposed project. Haul trucks and other vehicles would remain on preexisting roadways and NFS roads, and cultural resources would be flagged and avoided. As described in State CEQA Guidelines Section 15064.5(b)(1), a substantial adverse change in the significance of an historical or archaeological resource means the

demolition, destruction, relocation, or alteration of the resource. Because project implementation and operation consists of chipping and transporting biomass, no ground disturbance, demolition or alteration of buildings or structures, or other alterations to the built-environment would occur during project operations. Therefore, there is no potential to cause a substantial adverse change in the significance of a historical resource. For these reasons, there would be no impact on the significance of a historical resource.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

No impact. See discussion under item (a), above. The collection points where chipping and loading would occur as part of the proposed project are preexisting or would be implemented as part of fuels treatment activities prior to the start of the proposed project and therefore will not include any archaeological resources. No ground-disturbing activities would occur during implementation of the proposed project and haul trucks and other vehicles would remain on preexisting roadways and NFS roads. Thus, the proposed project does not have the potential to result in any change in the significance of an archaeological resource. There would be no impact.

c) Disturb any human remains, including those interred outside of formal cemeteries?

No impact. See discussion under item (a), above. The collection points where chipping and loading would occur as part of the proposed project are preexisting or would be implemented as part of fuels treatment activities prior to the start of the proposed project. No ground-disturbing activities would occur during implementation of the proposed project and haul trucks and other vehicles would remain on preexisting roadways and NFS roads. Thus, the proposed project does not have the potential to disturb any human remains. There would be no impact.

3.6 ENERGY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Energy.				
Would the project:				
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"/>
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"/>

3.6.1 Environmental Setting

The proposed project would collect and transport forest fuels biomass material for use in renewable energy generation, as pulp for paper products, and as home fuel for the Washoe Tribe. Energy consumption associated with implementation of the proposed project would occur from the use of nonrenewable resources such as fossil fuels consumed in breaking down and transporting forest material.

Renewable bioenergy conversion facilities that would receive biomass from the proposed project include Loyalton Biomass, Sierra Pacific Industries Lincoln, and Rio Bravo Rocklin. The Loyalton biomass facility sources biomass for energy production from nine counties comprising 5 million acres within an approximately 1-hour drive of the facility. Historically, more than 90 percent of the biomass fuel for the facility has been sourced from harvested material from forest thinning projects in the surrounding national forests, similar in type to the material associated with the proposed project. The Rio Bravo Rocklin facility is a 24.4-megawatt biomass facility located in the community of Lincoln, California. It accepts primarily forest material waste, and approximately 10 percent urban and agricultural waste that would otherwise go to landfills. Sierra Pacific Industries facility in Lincoln, California is an 18-megawatt biomass facility that turns wood waste into energy through a cogeneration plant. Bark, sawdust, and other low-grade byproducts from the sawmill manufacturing process is the primary fuel; however, the facility also accepts non-merchantable biomass products from forest thinning activities. Some of the power produced is used to operate the mill, and excess electricity is sold to local public utilities and energy service providers.

The Ampine facility in Sutter Creek, California, is a particle board manufacturing facility that uses wood residue from primarily sawmills, plywood plants and post-consumer use sources, and, to a lesser extent, pulped forest fuel material. Production at the facility requires approximately 700 tons of wood residue per day.

Biomass material from the proposed project would be included as regular feedstock to these facilities and would constitute a continuation of the current daily volume of material consumed at them. Bioenergy conversion facilities produce enough energy to be self-sustaining energy providers. The Ampine facility uses energy from existing service connections.

3.6.2 Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities locations for use as fuel in bioenergy generation, as raw material for wood products, or for use as home fuel for the Washoe Tribe. Haul trucks and other vehicles would travel on existing, or previously implemented roadways. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader.

Energy consumption regarding the proposed project would generally be limited to fossil fuel consumption by employee vehicles, the haul truck, chipper, loader, chainsaws, and other handheld or small equipment. The proposed project would include up to six people on a crew, who would commute to a loading site in single-passenger vehicles, and one haul truck that would transport chipped material from the treatment sites to biomass conversion facilities (along routes as depicted on Figure 2-5). These uses represent the use of a small quantity of fossil fuels. For cost control reasons, crews would operate efficiently, and the proposed project would be designed to transport forest material to the most cost-effective facility for use. Moreover, the project objective is to use slash material generated from fuels reduction forest thinning projects in the Lake Tahoe Basin as biomass for renewable energy production. This represents an important use of biomass for renewable energy production to meet the goals of the project.

As described above, biomass material from the proposed project would be included as regular feedstock to these facilities and would constitute a continuation of the current daily volume of material consumed at them. Bioenergy conversion facilities produce enough energy to be self-sustaining energy providers. The Ampine facility uses energy from existing service connections.

For these reasons, implementation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. This impact would be less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

Less than significant. The proposed project would not conflict with or obstruct any state or local laws, regulations, or plans that promote renewable energy or energy efficiency. The proposed project would utilize slash material generated from fuels reduction forest thinning projects in the Lake Tahoe Basin as biomass for renewable energy production.

The proposed project would advance the goals of California Senate Bill 1383, which establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025. The law provides CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets, which it does in part through adoption of programs and expansion of facilities that would use organic waste. One such strategy involves the continued use of biomass for use in electricity generation, which the proposed project would support. The proposed project would also support improvement of air quality within LTAB, and assist in achieving TRPA's air quality thresholds by reducing air pollutant emissions generated by burning thinned vegetation from fuels treatment activities in the Tahoe Basin.

The project would therefore support the goals of state and local laws, regulations, and programs aimed at reducing greenhouse gas emissions and promoting renewable energy. This impact would be less than significant.

3.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Geology and Soils.				
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey 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"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.7.1 Environmental Setting

GEOLOGY

Lake Tahoe is located in the northern Sierra Nevada, between the Sierra crest to the west and the Carson Range to the east (Saucedo 2005). Faulting and volcanism created the Lake Tahoe Basin over 2 million years ago, and as a result, the basin contains granitic, metamorphic, and volcanic rock (Saucedo 2005). The predominant bedrock in the Lake Tahoe Basin is Cretaceous granodiorite of the Sierra Nevada batholith.

Over the past 1.5 million years, the Tahoe Region has been altered by glacial activity, and most of the landforms surrounding the lake are a result of glaciation. During glacial activities, valley glaciers dammed the Truckee River Canyon, raising the water level of Lake Tahoe. Lakebed sediments were deposited in the bays and canyons around the lake as a result of the rising lake levels. The faulting, folding, and in some cases overturning of rock formations that has taken place during various periods of geologic activity, in combination with erosion, deposition, and subsequent cementation of rock materials that occurred during relatively quiet periods, have left a complex arrangement of geologic rock types and structures in the area. However, the clarity of Lake Tahoe is related to the prevalence of resistant granitic bedrock in the Lake Tahoe Basin and the unusually small drainage basin relative to the size of Lake Tahoe.

There are three major faults in the Lake Tahoe Basin, the West Tahoe Fault, the Stateline Fault, and Incline Faults. The Stateline–North Tahoe, Incline Village, and West Tahoe–Dollar Point faults all show evidence for large (2+ magnitude) rupture events within the past 11,000 years (Dingler et al. 2009). Studies by Brothers et al. (2009) suggest a magnitude-7 earthquake occurs every 2,000–3,000 years in the Lake Tahoe Basin, and that the largest fault in the Lake Tahoe Basin, West Tahoe, appears to have last ruptured between 4,100 and 4,500 years ago. The presence of these faults indicates the project area could be affected by seismic activity.

Rocks in the Meeks Creek Meadow project area consist of Pleistocene–Holocene glacial till and moraines (DOC 2010). The geology of Sugar Pine Point State Park is mostly Pleistocene–Holocene glacial till and moraines (DOC 2010). The geology of the south shore area consist of Pleistocene–Holocene glacial till and moraines in the lower topographic areas and Mesozoic granite and granodiorite in the higher elevations (DOC 2010).

SOILS

The Natural Resources Conservation Service (NRCS) Soil Survey of the Lake Tahoe Basin (NRCS 2018) describes many soil map units in the Lake Tahoe Basin. The roads and landing sites that are proposed for use in this project would be previously established as part of separate projects. Cover material at landings and along roads may consist of locally sourced fill material from these sites and would represent a mix of soils and sediment from these sites. Therefore a discussion about the site-specific soils would not provide relevant information about collection points.

All collection points would comply with all applicable general requirements and other provisions of Category 1 within the 2014 Timber Waiver issued by the Lahontan Regional Water Quality Control Board (Lahontan Water Board). Such measures include use of temporary water quality best management practices (BMPs) to prevent sediment or other contaminants from flowing into surface waters and prohibitions against operating equipment on soils that are saturated.

3.7.2 Discussion

- a) **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
- i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**

Less than significant. The forest fuels treatment sites are located within a seismically active area. The West Tahoe fault is within 1 mile of the collection point at Sugar Pine Point State Park treatment area, 2 miles of the collection points at Meeks Creek Meadow, and within 5 miles of the South Tahoe Fuels Treatment parcels, where collection points would be established (DOC 2010). The two primary ways that a project could result in the risk of loss, injury, or death from fault rupture would be a change in use of an area that would exacerbate the risk of fault rupture, or the placement of habitable or non-habitable structures that could be damaged or collapse, causing loss, injury, or death, in the event

of fault rupture. The proposed project does neither of these things; that is, it would not alter uses (collection points would continue to be managed as open space and used for undeveloped recreation and conservation purposes), nor would the proposed project include construction of structures of any kind. This impact would be less than significant.

ii) Strong seismic ground shaking?

Less than significant. As indicated above under item (a)(ii), the project is located in a seismically active area, and could therefore experience strong seismic shaking. However, similarly to item (a)(ii), above, the two primary ways that a project could result in the risk of loss, injury, or death from seismic shaking would be a change in use of an area that would exacerbate the magnitude of shaking, or the placement of habitable or non-habitable structures that could be damaged or collapse, causing loss, injury, or death, in the event of seismic shaking. The proposed project would not include the construction of habitable structures, and collection points would continue to be managed as open space and used for undeveloped recreation and conservation purposes. Therefore, the risk of loss, injury, or death from seismic ground shaking would be low with implementation of the proposed project, and this impact would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less than significant. Liquefaction and other seismic-related ground failure events primarily affect structures. Moreover, soils within the fuels treatment areas that would collection points would be located on are well-drained and therefore not prone to liquefaction. Because the proposed project would not result in construction of any new structures, and soils at collection points are not generally prone to liquefaction, impacts related to liquefaction would be less than significant.

iv) Landslides?

Less than significant. The proposed project is not located in areas of mapped historic landslides (DOC 2020b). Moreover, there are no proposed structures associated with the proposed project that could be damaged by landslides, and the proposed project does not include ground-disturbing activities that would modify topography or cause loading that could exacerbate the risk of a landslide occurring. Therefore, impacts related to loss, injury, or death from landslides would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant. Traffic from heavy equipment used to chip, load, and haul biomass would travel on preexisting, paved and unpaved NFS roads, and paved State Parks access roads. Truck and equipment access over temporary and/or permanent roads would be limited but does have the potential to dislodge soil particles and accelerate erosion. These effects would be highly localized, minor (because they would be associated with a maximum of 20 trips per day which would be associated primarily with worker trips and the use of personal vehicles), and consistent with normal use of these roadways. Additionally, LTBMU, State Parks, and TRPA provide standards for road construction and maintenance to prevent or limit erosion and sedimentation from roadways, including unpaved roads. Additionally, each landing site would comply with all applicable general requirements and other provisions of Category 1 within the 2014 Timber Waiver issued by the Lahontan Water Board. Such measures include the use of temporary water quality BMPs to prevent sediment or other contaminants from flowing into surface waters and prohibitions against operating equipment on soils that are saturated. Consequently, any erosion associated with the project would be highly localized and minor, and would therefore be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less than significant. Generally, impacts associated with unstable soils relate to potential damage to structures. The proposed project would remove stockpiled biomass; it would not develop any new structures. Therefore, no

structures would be affected by unstable soils. Landslide-related hazards associated with proposed public access are addressed under item (a)(iv), above. Project-related impacts related to unstable soils would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

Less than significant. Similar to item (c), above, impacts associated with expansive soils relate to potential damage to structures, which could experience compromised structural integrity if placed on expansive soils. The proposed project would not create buildings or structures, and moreover is not located in an area of expansive soils. Therefore, this impact would be less than significant.

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?

No impact. The proposed project would not involve the installation of any septic system or other form of wastewater disposal. No impact would result.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No impact. No ground-disturbing activities are proposed as a part of the project; therefore, no excavations or borings into soil, subsoil, or bedrock would result from project activities and no paleontological or geologic features would be affected. No impact would result.

3.8 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Greenhouse Gas Emissions.				
Would the project:				
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"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>

3.8.1 Environmental Setting

PHYSICAL SCIENTIFIC BASIS OF GREENHOUSE GAS AND CLIMATE CHANGE

Certain gases in the earth’s atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth’s surface temperature. Solar radiation enters the earth’s atmosphere from space. Most solar radiation passes through GHGs as it travels towards the earth; however, infrared radiation reflected by the earth’s surface is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with on-road and off-road transportation, industrial/manufacturing, electricity generation by utilities and consumption by end users, residential and commercial onsite fuel usage, and agriculture and forestry. It is “extremely likely” that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing (IPCC 2014:5). This warming is observable considering the 20 hottest years ever recorded occurred within the past thirty years (McKibben 2018).

Climate change is a global problem. GHGs are global pollutants because even local GHG emissions contribute to global impacts. GHGs have long atmospheric lifetimes (one to several thousand years) and persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any particular GHG molecule is dependent on multiple variables and cannot be determined with any certainty, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remain stored in the atmosphere (IPCC 2013:467).

The quantity of GHGs that ultimately result in climate change is not precisely known but is enormous. No single project alone would measurably contribute to an incremental change in the global average temperature, or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative

GREENHOUSE GAS EMISSION SOURCES AND SINKS

As discussed previously, GHG emissions are attributable in large part to human activities. Emissions of CO₂ are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices, organic material decomposition in landfills, and the burning of forest fires (Black et al. 2017). Nitrous oxide emissions are also largely attributable to agricultural practices and soil management. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution (CO₂ dissolving into the water), respectively, two of the most common processes for removing CO₂ from the atmosphere.

The total GHG inventory for California in 2017 was 424 million metric tons of carbon dioxide equivalent (MMTCO_{2e}) (CARB 2019). This is less than the 2020 target of 431 MMTCO_{2e} equal to the inventory for 1990 (CARB 2018:1). The 2017 GHG inventory for California is summarized below in Table 3-4.

Table 3-4 2017 Statewide GHG Emissions by Economic Sector¹

Sector	Percent
Transportation	41
Industrial	24
Electricity generation (in state)	9
Electricity generation (imports)	6
Agriculture	8
Residential	7
Commercial	5

¹ The inventory provides estimates of anthropogenic GHG emissions within California, as well as emissions associated with imported electricity; natural sources are not included in the inventory.

Source: CARB 2019

FEDERAL PLANS, POLICIES, LAWS, AND REGULATIONS

On December 7, 2009, EPA issued findings regarding GHGs under the CAA. The *Final Endangerment and Cause or Contribute Findings for Greenhouse Gases* states that current and projected concentrations of the six key well-mixed GHGs in the atmosphere—CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—threaten the public health and welfare and that combined emissions of GHGs from new motor vehicles contribute to this issue. This allowed EPA to regulate GHGs under the CAA. For example, EPA and the National Highway Traffic Safety Administration (NHTSA) issued two rules (81 Fed. Reg. 73478 and 77 Fed. Reg. 62623) that require substantial improvements in fuel economy for all vehicles sold in the U.S. for model years 2017 through 2025 of passenger cars, light-duty trucks, and medium-duty passenger vehicles. In 2012, EPA issued CARB a CAA waiver that allowed California to more strictly regulate pollution from cars than the federal government. However, Part One of the Federal SAFE Rule, jointly issued by EPA and NHTSA, which went into effect on November 26, 2019, revokes California's existing CAA waiver to establish more stringent standards related to GHGs (84 FR 51310). At this time, the implications of enacting the SAFE Rule and rescinding the CAA Section 209 waiver for California's future emissions are contingent on a variety of unknown factors.

STATE PLANS, POLICIES, LAWS, AND REGULATIONS

Statewide GHG Emission Targets and the Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the state government for approximately two decades (CEC 2019). GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (Assembly Bill [AB] 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016). Executive Order (EO) S-3-05 calls for statewide GHG emissions to be reduced to

80 percent below 1990 levels by 2050. EO B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets are in line with the scientifically established levels needed in the United States to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (United Nations 2015:3).

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by CARB, outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB 2017:1, 3, 5, 20, 25–26). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). The state has also passed more detailed legislation addressing GHG emissions associated with industrial sources, transportation, electricity generation, and energy consumption, as summarized below.

The *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan* (draft plan), prepared by the California Environmental Protection Agency (CalEPA), California Department of Food and Agriculture (CDFA), the California Natural Resources Agency (CNRA), CARB, and California Strategic Growth Council (SGC), was released in January 2019. The draft plan is specific to the natural and working lands sector, which includes farmland, rangeland, forests, grasslands, wetlands, riparian areas, seagrass, and urban green space. The draft plan addresses the carbon flux from this sector, including the ever-dynamic changes in both GHG emissions and carbon sequestration associated with the management of these lands. It is estimated that California's natural and working lands lost approximately 170 million metric tons (MMT) of carbon between 2001 and 2014. Most of these losses were due to wildfire. This loss of carbon is equivalent to cumulative emissions of 630 MMTCO_{2e} of previously sequestered carbon removed from the land over the same period (applying the atomic weight ratio of 3.67 for carbon to CO₂). However, not all the carbon lost was emitted to the atmosphere as CO₂. Some carbon leaves the land but persists in durable wood products. Other carbon losses are part of normal ecosystem function (CalEPA et al. 2019:9).

The draft plan serves as a multi-disciplinary approach to conserve and maintain a resilient natural and working lands sector that will gradually shift the natural and working lands sector from being a net carbon emitter to being a net carbon sink, while also improving air quality, water quality, wildlife habitat, recreation, and providing other benefits. The draft plan sets goals for, at minimum, increasing the rate of state-funded soil conservation practices fivefold, doubling the rate of state-funded forest management and restoration efforts, tripling the rate of state-funded oak woodland and riparian reforestation, and doubling the rate of state-funded wetland and seagrass restoration (CalEPA et al. 2019:13). The measures included in the draft plan are projected to result in cumulative emissions of 21.6 to 56.8 MMTCO_{2e} by 2030 and cumulative emissions reduction of -36.6 to -11.7 MMTCO_{2e} by 2045 (CalEPA et al. 2019:13-14).

The *California Forest Carbon Plan* aims to improve the health and resilience of California's forests, increase their carbon storage potential, and minimize their atmospheric emissions of GHG. While the Forest Carbon Plan primarily targets carbon storage and emissions, it also emphasizes improving and safeguarding interrelated ecosystem services (co-benefits), as well as social and economic considerations (Forest Climate Action Team 2018:7, 8). The Forest Carbon Plan was developed by the Forest Climate Action Team, which includes California Department of Forestry and Fire Protection (CAL FIRE), the California Natural Resources Agency, and the California Environmental Protection Agency.

LOCAL PLANS, POLICIES, LAWS, AND REGULATIONS

El Dorado County

The El Dorado County General Plan (2004) does not specifically include policies or goals to reduce GHG emissions. However, the general plan provides countywide goals and polices aimed at improving energy efficiency, transportation efficiency, and reducing air emissions, all of which would reduce GHGs.

The El Dorado County Board of Supervisors adopted Resolution No. 29-2008, the “Environmental Vision for El Dorado County,” on March 25, 2008. The Resolution sets forth goals and calls for implementation of positive environmental changes to reduce global impact, improve air quality and reduce dependence on landfills, promote alternative energies, increase recycling, and encourage local governments to adopt green and sustainable practices. Relevant goals related to GHGs and climate change focus on reducing GHG emissions from the transportation sector, encouraging sustainable land use planning, and promoting clean energy and the use of alternative fuels (El Dorado County 2008).

At the time of writing this IS, El Dorado County has not adopted a Climate Action Plan consistent with State CEQA Guidelines Section 15185.5(b).

3.8.2 Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than significant. GHG emissions would be generated by processing and loading equipment and haul trucks used to transport biomass to receiving facilities, and by combustion of biomass. The proposed project would also result in the avoidance of GHG emissions because biomass material that is removed for out-of-basin uses would not be piled and burned in the Tahoe Basin. As described above under Section 3.3.2, item (b), a flexible approach to emissions estimates was used by assuming that all biomass utilization would occur at a biomass energy facility in Lincoln, California, which reflects both the maximum amount of utilization emissions, as well as the farthest possible haul distance that would reasonably occur with implementation of the proposed project. A summary breakdown of the of the emissions levels associated with the proposed project is provided in Table 3-5. See Appendix A for detailed parameters and calculations.

Table 3-5 Summary of Greenhouse Gas Emissions

Emissions Source	GHG Emissions (MTCO _{2e})
Worker Trips	7.4
Truck Loading Equipment	136
Haul Truck Exhaust	153
Biomass Power Plant	12,484
Avoided GHG Emissions from Burning of Biomass Piles	-13,468
Net Change in GHG Emissions	-688

Note: MTCO_{2e} = metric tons CO₂ equivalents

See Appendix A for detailed modeling parameters and results.

Source: Modeling conducted by Ascent Environmental in 2020

As shown in Table 3-5, implementation of the proposed project would result in a net reduction in GHG emissions. This is primarily because the open burning of biomass piles generates more methane than the controlled combustion of biomass at a biomass power generation facility, and because methane has a global warming potential that is 25–28 times greater than CO₂ (IPCC 2007:Table B-1; IPCC 2013:714).

In summary, because all GHG-generating project activities (including hauling biomass, combustion at a biomass power facilities, combustion from the use of home fuelwood, and use in wood products generation) is less GHG-intensive than piling it and burning on site, the proposed project would not result in a net increase in GHG emissions. Moreover, given the annual throughput of the 20-megawatt Loyaltan biomass conversion facility is 72,700 bone dry tons (BDT) per year, and a capacity to process over 100,000 BDT/year, the relatively small quantity of biomass material associated with this project, 4,250 BDT per year for 2 years, or 5.8 percent of the annual throughput, would not result

in any need for a new biomass power facility to be constructed. For these reasons, this impact would be less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than significant. The proposed project would be consistent with applicable plans, policies, and regulations aimed at reducing GHG emissions, including California's *2017 Climate Change Scoping Plan*, the *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan*, and the *California Forest Carbon Plan*. The ultimate purpose of the project is to reduce wildfire risk, which could reduce GHG emissions and increase carbon sequestration over the long term.

California's 2017 Climate Change Scoping Plan

Prepared by the California Air Resources Board (CARB), the *2017 Scoping Plan* outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals." It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste).

The *2017 Scoping Plan* identifies a 15–20 MMTCO₂e reduction from business-as-usual emissions from the natural and working lands sector to meet the state's 2030 target. This section includes lands used for agriculture, grazing, and forestry. This reduction would be achieved through carbon sequestration in trees, other vegetation, soils, and aquatic sediment. Recent trends indicate that from 2001 to 2010, approximately 120 million metric tons of carbon were lost through wildland fire. California's climate objective for natural and working lands is to maintain them as a carbon sink (i.e., net zero or negative GHG emissions) and, where appropriate, minimize the net GHG and black carbon emissions associated with management, biomass utilization, and wildfire events. To achieve this objective, the *2017 Scoping Plan* focuses on continued research and development to advance the state of science on carbon dynamics, develop a natural and working lands inventory, and directs CNRA and other state agencies to complete a *Natural and Working Lands Climate Change Implementation Plan* consistent with the carbon neutrality goal of Executive Order B-55-18. Specifically, the *2017 Scoping Plan* acknowledges the role of fuel reduction treatments and prescribed burns in managing natural and working lands to reduce GHG emissions. Development of the *Natural and Working Lands Climate Change Implementation Plan* is discussed in greater detail below.

Draft 2030 Natural and Working Lands Implementation Plan

In a joint, interagency effort, CalEPA, CDFA, CNRA, CARB, and SGC released the *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan* in January 2019. The draft plan is specific to the natural and working lands sector, which includes farmland, rangeland, forests, grasslands, wetlands, riparian areas, seagrass, and urban green space. The draft plan addresses the carbon flux from this sector, including the ever-dynamic changes in both GHG emissions and carbon sequestration associated with the management of these lands. It is estimated that California's natural and working lands lost approximately 170 MMT of carbon between 2001 and 2014. Most of these losses were due to wildfire. This loss of carbon is equivalent to cumulative emissions of 630 MMTCO₂e of previously sequestered carbon removed from the land over the same period (applying the atomic weight ratio of 3.67 for carbon to CO₂). However, not all the carbon lost was emitted to the atmosphere as CO₂. Some carbon leaves the land but persists in durable wood products. Other carbon losses are part of normal ecosystem function (CalEPA et al. 2019:9). The draft plan serves as a multi-disciplinary approach to conserve and maintain a resilient natural and working lands sector that will gradually shift the natural and working lands sector from being a net carbon emitter to a net carbon sink, while also improving air quality, water quality, wildlife habitat, recreation, and providing other benefits. The draft plan sets goals for, at a minimum, increasing the rate of state-funded soil conservation practices fivefold, doubling the rate of state-funded forest management and restoration efforts, tripling the rate of state-funded oak woodland and riparian reforestation, and doubling the rate of state-funded wetland and seagrass restoration. The measures included in the draft plan are projected to result in cumulative emissions of 21.6 to 56.8 MMTCO₂e by 2030 and cumulative emissions reduction of -36.6 to -11.7 MMTCO₂e by 2045.

The draft plan indicates that these GHG reductions will be met through a variety of practices under four broad pathways: conservation, forestry, restoration, and agriculture. One suite of practices is called, "Forestry – Improved forest health and reduced wildfire severity." This suite of practices includes prescribed fire, mechanical thinning, and understory treatment. It aims to "restore health and resilience to overstocked forests and prevent carbon losses from severe wildfire, disease, and pests."

The implementation goals for this practice includes 23,800–73,300 acres of prescribed fire per year, 59,000–73,000 acres of thinning per year, and 23,500–25,300 acres of understory treatment per year. The draft plan notes that, although fuel reduction treatments involve near-term carbon costs, they result in long-term net carbon benefits in California. Fuel reduction activities, such as mechanical thinning and prescribed fire, reduce stand densities and fuel loads, restore the structure and composition of forest ecosystems, and lower the potential for damaging, high-severity fire, which is currently the primary cause of GHG emissions and carbon loss from the land sector. In the long-term, these activities are expected to result in climate benefits and healthier, more stable, and more resilient forests.

California Forest Carbon Plan

In January 2017, CAL FIRE, in coordination with CNRA and CalEPA, released the *California Forest Carbon Plan*. The plan serves to implement policies to meet the forest carbon goals embodied in the *2017 Scoping Plan*. Currently, much of California's forests are unhealthy, supporting unnatural density that lack resilience to drought, disease, insect and parasite infestation, and large, severe wildfire. The plan describes forest conditions across California; provides a projection of future conditions in consideration of climate change; and describes goals and related specific actions that may be taken to improve forest health, including resilient carbon sequestration; and provides principles and policies to guide and support these actions. Specifically, the plan identifies the following targets for forest restoration and treatment activities on non-federal forest lands:

- ▶ by 2020, double the current rate of forest restoration and fuels reduction treatments, including prescribed fire, through the CAL FIRE Vegetation Treatment Program from the recent average of 17,500 acres per year to 35,000 acres per year;
- ▶ by 2030, increase forest restoration and fuels treatments, including mechanical thinning and prescribed burning, from the current rate of approximately 17,500 acres per year to 60,000 acres per year. This target is based on CAL FIRE's determination of an operationally feasible increase in activity through its Vegetation Treatment Program;
- ▶ through CAL FIRE's Forest Practice Program and the Timber Regulation and Forest Restoration Program, ensure that timber operations conducted under the Forest Practice Act and Rules contribute to the achievement of healthy and resilient forests that are net sinks of carbon, with due consideration given to all forest carbon pools;
- ▶ promote increasing the acreage of forest carbon projects and remove barriers to their implementation; and
- ▶ to address forest health and resiliency needs identified statewide on nonfederal lands, CAL FIRE has estimated that the rate of treatment of all types would need to be increased to approximately 500,000 acres per year to make an ecologically meaningful difference at a landscape scale. This estimate is based on consideration of ecological need and predictions of capacity to implement treatments. It is an aspirational target to work toward. This goal is achievable with increased resources and expanded markets for woody materials. These treatments include those that generate revenue from harvest materials, such as commercial thinning and regeneration harvests.

Given that the project is aligned with the specific goals and strategies called out in these plans, as discussed above, the project would be consistent with state plans and policies for carbon management in natural and working landscapes. This impact would be less than significant.

3.9 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hazards and Hazardous Materials.				
Would the project:				
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"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>
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"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>

3.9.1 Environmental Setting

HAZARDOUS MATERIALS

For purposes of this section, the term “hazardous materials” refers to both hazardous substances and hazardous wastes. A “hazardous material” is defined in the Code of Federal Regulations (CFR) as “a substance or material that ... is capable of posing an unreasonable risk to health, safety, and property when transported in commerce.” (49 CFR 171.8.) California Health and Safety Code Section 25501 defines a hazardous material 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 which 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.

Hazardous wastes are defined in California Health and Safety Code Section 25141(b) as wastes that ... because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

The collection points are located on NFS and State Parks lands within the Lake Tahoe Basin. Motorized vehicles, heavy equipment, chainsaws, and hand tools would be used to implement the project. Project implementation would require the use of small amounts of common hazardous materials (such as fuel, oil, and lubricants) during implementation.

There are no known hazardous material sites on any of the proposed project sites, and the project does not propose any ground-disturbing activities that could disturb known hazardous material sites.

SCHOOLS

Schools located near the treatment site collection points include Sierra House Elementary School, approximately 0.4-mile from the nearest South Tahoe Project treatment unit; and Bijou Community School, approximately 0.7-mile northwest of the South Tahoe Project treatment unit.

AIRPORTS

The Lake Tahoe Airport in South Lake Tahoe is the nearest airport and is located approximately 2 miles north of the closest collection point. There are no private airstrips in the vicinity of the treatment sites.

EMERGENCY RESPONSE AND EVACUATION PLANS

The Placer County Office of Emergency Services (OES) implements the Placer Operational Area East Side Emergency Evacuation Plan (Placer County 2015). This plan identifies SRs 28, 89, and 267 as the major evacuation routes in the project vicinity. When necessary, surface streets would also be designated for evacuees and for emergency vehicle traffic. Several emergency operations centers and evacuation centers are located in Kings Beach, Tahoe City, and Truckee. The nearby North Tahoe High School and North Tahoe School are identified as evacuation centers.

The El Dorado County Multi-Jurisdictional Local Hazard Mitigation Plan serves as the implementation program for the coordination of hazard planning and disaster response within El Dorado County (El Dorado County 2004). El Dorado County OES partners with El Dorado County Health and Human Services Agency to coordinate emergency response with local jurisdictions during local disasters and emergencies. The City of South Lake Tahoe identifies U.S. 50 as the primary evacuation route (City of South Lake Tahoe 2020).

MANAGEMENT OF HAZARDOUS MATERIALS

Federal laws require planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and if such materials are accidentally released, to prevent or mitigate injury to health or the environment. EPA is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials.

Applicable federal regulations pertaining to hazardous materials are primarily contained in CFR Titles 29, 40, and 49. Hazardous materials, as defined in the CFR, are listed in 49 CFR 172.101.

In California, both federal and state community right-to-know laws are coordinated through the Governor's Office of Emergency Services (Cal OES). The federal law, SARA Title III (the Emergency Planning and Community Right-to-Know Act), described above, encourages and supports emergency planning efforts at the state and local levels and to provide local governments and the public with information about potential chemical hazards in their communities. Because of the community right-to-know laws, information is collected from facilities that handle (e.g., produce, use, store) hazardous materials above certain quantities.

If a project proponent uses or plans to use hazardous materials at levels that reach applicable state (Chapter 6.95 of the California Health and Safety Code) and/or federal thresholds, businesses are required to prepare a Hazardous Materials Business Plan, which would include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment. The plan is submitted to the administering agency, in this case the Placer County Environmental Health Division (Certified Unified Program Agency [CUPA]), to implement and enforce.

The California Department of Toxic Substances Control (DTSC), a division of CalEPA, has primary regulatory responsibility over hazardous materials in California, working in conjunction with EPA to enforce and implement hazardous materials laws and regulations.

Transport of Hazardous Materials

The U.S. Department of Transportation regulates transport of hazardous materials between states and is responsible for protecting the public from dangers associated with such transport. The federal hazardous materials transportation law, 49 U.S. Code (USC) 5101 et seq. is the basic statute regulating transport of hazardous materials in the United States.

The State of California has adopted U.S. Department of Transportation regulations for the movement of hazardous materials originating within the state and passing through the state; state regulations are contained in 26 California Code of Regulations (CCR). State agencies with primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and Caltrans. Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

Worker Safety

The federal Occupational Safety and Health Administration (OSHA) is the agency responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 9 USC 651 et seq.). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards relating to the handling of hazardous materials.

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are typically more stringent than federal OSHA regulations and are presented in Title 8 of the CCR. Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

El Dorado County General Plan

The Public Health, Safety, and Noise Element of the El Dorado County General Plan includes goals and policies intended to recognize and reduce threats to public and environmental health resulting from the use, storage, manufacture, transport, release, and disposal of hazardous materials. Some policies require the county to ensure that projects use, transport, store, and dispose of hazardous materials in compliance with local, state, and federal safety standards (Measure HS-N, Policy 6.6.1.2). Others require the county to create additional plans to collect and maintain information on sites known or suspected to be contaminated by hazardous materials, and to create plans to ensure the safety of the public from the storage, use, and transportation of hazardous materials (Measure HS-M, HS-O, Policy 6.6.1.1, Policy 6.6.1.2) (Placer County 2004).

Certified Unified Program Agency

Placer County's Environmental Health Division is the designated CUPA authorized pursuant to Section 25502 of Chapter 6.95 of the California Health and Safety Code for most areas of the county, including within the Tahoe Basin. The Unified Program is a consolidation of state environmental programs into one program under the authority of a CUPA. Agencies participating with the county in the program include Cal EPA, DTSC, Cal OES, Office of State Fire Marshal, and the California State Water Resources Control Board. Programs under the Environmental Health Division include, but are not limited to, review of Hazardous Materials Business Plans, the accidental release prevention program, and the hazardous waste generation program.

3.9.2 Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities for use as fuel in bioenergy generation, as raw material for wood products, or for use as home fuel for the Washoe Tribe. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader.

Motorized vehicles, heavy equipment, chainsaws, and hand tools would be used to implement the proposed project. This equipment would require the use of small amounts of common hazardous materials (such as fuel, oil, and lubricants). The proposed project would comply with applicable regulations and laws for the use, handling, and storage of common hazardous materials needed for the operation and loading of the transport vehicles. As required by design features and construction controls associated with the proposed project, equipment would be maintained according to industry-standard best management practices, including monitoring for leaks, and removal from service and replacement if necessary. In the event of an accidental release, all work in the area would cease, and materials would be immediately contained and handled in accordance with applicable regulations intended to protect environmental and public health and safety. Emergency spill kits would be maintained with crews on project vehicles during implementation. Therefore, the impact would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities for use as fuel in bioenergy generation, as raw material for wood products, or for use as home fuel for the Washoe Tribe. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader.

As described under item (a), above, motorized vehicles, heavy equipment, chainsaws, and hand tools would be used to implement the proposed project. This equipment would require the use of small amounts of common hazardous materials (such as fuel, oil, and lubricants). The proposed project would comply with applicable regulations and laws for the use, handling, and storage of common hazardous materials needed for the operation and loading of the transport vehicles. As required by design features and construction controls associated with the proposed project, equipment would be maintained according to industry-standard best management practices, including monitoring for leaks, and removal from service and replacement if necessary. In the event of an accidental release, all work in the area would cease, and materials would be immediately contained and handled in accordance with applicable

regulations intended to protect environmental and public health and safety. Emergency spill kits would be maintained with crews on project vehicles during implementation. Therefore, the impact would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No impact. None of the collection points or receiving facilities are located within 0.25 mile of any schools. The closest school to the project biomass loading sites is the Sierra House Elementary School, located 0.4 mile from the nearest South Tahoe Fuels Treatment Project parcel. The closest school to the drop-off location at the Loyalton biomass conversion facility is Loyalton High School, located approximately 0.6 mile from the facility. Project implementation would require the use of small amounts of common hazardous materials (such as fuel, oil, and lubricants) during implementation and although accidental releases could occur, materials would be handled in compliance with applicable laws and regulations intended to protect public health and safety, as identified above under items (a) and (b). Additionally, all equipment would be properly maintained per manufacturer specifications. Therefore, there would be 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?

No impact. The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the state, local agencies, and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. The DTSC EnviroStor database provides DTSC's component of Cortese List data. Collection points, haul routes, and receiving facilities are not identified on the Cortese list hazardous materials lists; therefore, there would be 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?

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Several of the South Tahoe Project Fuels Treatment Project parcels are located within 2 miles of the Lake Tahoe Airport. Material would be hauled to regional receiving facilities. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader. Project personnel would be equipped with personal protective equipment, including ear protection, for activities at biomass loading sites. Project activities would be carried out in compliance with design specifications and construction controls for the proposed project including the implementation of temporary traffic safety measures that provide the public with adequate warning of potentially hazardous conditions associated with vehicle access and hauling. These measures would include posting signs that meet the requirements of Manual on Uniform Traffic Section 61.1.6B that warn of logging operations or truck crossings. Prior to project activities, the project proponent would also be required to post signage in neighborhoods identifying the timing and duration of operations associated with the project. Additionally, truck drivers would be instructed to maintain safe driving speeds and be alert for the presence of pedestrians and children along neighborhood haul routes. Therefore, the project would not result in a safety hazard for people residing or working near the loading or hauling sites. Additional information on impacts related to project noise on workers and nearby residents is addressed in Section 3.13.2, item (c). This impact would be less than significant.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader. The proposed project would not influence regional or local population. During implementation of the project, there would be an increase in the number of employee vehicles accessing the chipping and loading sites, and in the number of trucks hauling biomass from the sites. The proposed project would result in a temporary increase in the number of vehicles on local roads within the Tahoe Basin, which would include up to six employee vehicles, one haul truck, and one chip van per day. Employees would arrive in the morning and park at an access point to the loading site and leave in the evening. The haul trucks and chip van entering and exiting the loading sites would be dispersed throughout the day. As discussed in Section 3.17, "Transportation," the proposed project would not result in a significant impact on traffic conditions. The haul truck entering and exiting California state routes near collection points would be slow-moving and could temporarily slow down traffic but would not interfere with the ability to implement an emergency response plan or emergency evacuation plan. Additionally, during chipping and loading activities, public access to landing and road sites would be blocked using flagging tape and signs and information would be posted at work site access points to notify the public of activities and prevent access.

The project would not result in any physical changes that would interfere with an emergency response plan or emergency evacuation plan. In the event of a natural disaster or regional emergency, project activities would cease so as not to interfere with traffic. For these reasons, the proposed project would not interfere with an adopted emergency response plan or emergency evacuation plan. The impact would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader. The proposed project would comply with the applicable regulations and laws for the use, handling, and storage of common hazardous materials need for the operation and loading of the transport vehicles. Project implementation would require the use of common hazardous materials (such as fuel, oil, and lubricants) during implementation and although accidental releases could occur, materials would be handled in accordance with applicable regulations intended to protect public health and safety. Additionally, all equipment would be properly maintained per the manufacturer's specifications and would be equipped with the applicable spark-reducing equipment during all project activities. Additionally, the risk of a small crew of six individuals, adhering to applicable laws and regulations, using properly maintained equipment of significantly increasing the pre-existing fire risk would be minimal. The impact would be less than significant.

3.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hydrology and Water Quality.				
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial on- or offsite erosion or siltation;	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.10.1 Environmental Setting

Lake Tahoe is fed by 63 tributary streams that drain directly to the lake. The Truckee River at the northwest end of the Tahoe Basin is the lake’s only outlet, flowing to Pyramid Lake in Nevada. A dam constructed at Tahoe City in the early 1900s regulates water flow to the Truckee River from the natural rim (6,223 feet above sea level) to the maximum legal lake level of 6,229.1 feet. The lake is 12 miles wide and 22 miles long, with 72 miles of shoreline.

Average precipitation, measured at almost 32 inches a year at Tahoe City, generally falls as snow in the higher elevations and as snow and rain in the lower elevations, including the lake shore from October to May. Peak stream runoff in the watersheds of interest is typically triggered by spring snowmelt in May and June. The snowpack near the lakeshore predominantly melts before the peak in snowmelt and runoff from the higher elevations. Land cover within the Tahoe Basin is primarily forest, with areas of granitic outcrops and meadows.

The landing sites and access roads within the Meeks Creek Meadow forest fuels treatment site are located adjacent to Meeks Creek within the Meeks Creek watershed, which drains to Lake Tahoe. The landing site and access road in Sugar Pine Point State Park are located mostly within the General Creek watershed, which also drains to Lake Tahoe. The landing areas in the South Tahoe Project fuels treatment sites are located within the Upper Truckee, Trout Creek, Taylor Creek, and Tallac Creek watersheds. Project activities would only take place in loading sites, landings, and roads, which would not be located within floodplains or riparian areas. Project activities would not take place in SEZs.

3.10.2 Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities for use as fuel in bioenergy generation, as raw material for wood products, or for use as home fuel for the Washoe Tribe. No ground-disturbing activities would be required to implement the project, as the proposed project is limited to chipping, loading, and hauling of material. Haul trucks and other vehicles would travel on existing, or previously implemented roadways. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader.

Material chipping and loading would occur on existing, established landings implemented during prior fuels treatment activities. As described in Section 3.7, "Geology and Soils," traffic from heavy equipment used to chip, load, and haul biomass would travel on preexisting, unpaved NFS roads. Truck and equipment access over temporary and/or permanent roads would be limited (up to 20 trips per day on unpaved roads) but does have the potential to dislodge soil particles and accelerate erosion. These effects would be highly localized, and consistent with normal use of these roadways. Additionally, each landing site would comply with all applicable general requirements and other provisions of Category 1 within the 2014 Timber Waiver issued by the Lahontan Regional Water Quality Control Board. Such measures include use of temporary water quality BMPs to prevent sediment or other contaminants from flowing into surface waters and prohibitions against operating equipment on soils that are saturated. Sediment and erosion control measures would be implemented at landings and along roads that would be used for the proposed project, and such areas would be maintained according to LTBMU, TRPA, and State Parks BMPs for construction and maintenance of such features. No new landings or roads would be developed for this project, and the project would not involve any other ground-disturbing activities. Because the proposed project would require implementation of water quality BMPs and erosion control measures, and would involve limited use of unpaved roads, the proposed project would not violate water quality standards or waste discharge requirements and this impact would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No impact. The proposed project involves chipping, loading, and transport of biomass generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. No ground-disturbing activities would be required to implement the project, as the proposed project is limited to chipping, loading, and hauling of material. The proposed project would not include the creation of any impervious surfaces, and therefore would not interfere with groundwater recharge and would not deplete groundwater supplies in any way. Existing loading sites would be used for project activities and no new structures would be constructed. There would be no impact on ground water supply or recharge.

c) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

i) **Result in substantial on- or offsite erosion or siltation;**

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be chipped and loaded at existing collection points and transported from these sites along existing roadways. No ground-disturbing activities would be required to implement the project. Additionally, no impervious surfaces would be constructed as part of the proposed project. Consequently, the project would not alter the existing drainage pattern of collection points or temporary roadways, and therefore the potential for the project to alter drainage patterns in a manner that results in substantial on- or off-site erosion or siltation would be less than significant.

ii) **Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;**

No impact. As described under item (c)(i) above, no new landings or roads would be developed for this project, and the project would not involve ground-disturbing activities or the construction of any impervious surfaces. Therefore, the proposed project would not alter drainage patterns at collection points or along roadways in a manner that could generate increased runoff that would result in on- or off-site flooding. Therefore, the proposed project would have no impact relative to flooding.

iii) **Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**

No impact. The proposed project would not create impervious surfaces, concentrate runoff, or direct runoff to existing or planned stormwater drainage systems. For these reasons, the project would have no impact on the runoff volumes or pollutant load in existing or planned stormwater drainage systems.

iv) **Impede or redirect flood flows?**

No impact. As described under item (c)(i) above, no new landings or roads would be developed for this project, and the project would not involve ground-disturbing activities or the construction of any impervious surfaces. Therefore, the proposed project would not alter drainage patterns at collection points or along roadways in a manner that could impede infiltration rates or redirect flood flows. Therefore, the proposed project would have no impact relative to flood flow.

d) **In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?**

No impact. Loading of biomass material would occur on existing landings outside of the range of a seiche or tsunami on Lake Tahoe. Additionally, landings and roads associated with these forest fuels treatment activities would be located outside floodplains. Therefore, the proposed project would have no impact relative to inundation by seiche, tsunami, or flood hazard.

e) **Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

Less than significant. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities for use as fuel in bioenergy generation, as raw material for wood

products, or for use as home fuel for the Washoe Tribe. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment. The project would adhere to all applicable water quality control and management plans, including the Lahontan Water Board Basin Plan and the TRPA Regional Plan, through adherence to sediment and erosion control measures that would be implemented at landings and along roads and maintained according to LTBMU, TRPA, and State Parks BMPs for construction and maintenance of such features. Additionally, the proposed project would not use groundwater or impede its recharge, so a sustainable groundwater management plan would not be affected; therefore this impact is less than significant.

3.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Land Use and Planning.				
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>

3.11.1 Environmental Setting

All collection points are within areas designated Conservation or Recreation by TRPA. Typical land uses surrounding collection points are a mixture of urban residential, mixed use, recreation, conservation, and backcountry. Meeks Creek Meadow is adjacent to urbanized development, developed recreation sites, an area of concentrated public use, and the northeastern edge of Desolation Wilderness. The South Tahoe Fuels Treatment Project parcels are forested lots adjacent to urbanized areas along Pioneer Trail and U.S. 50 in the Trout/Cold Creek area of the Lake Tahoe Basin, as well as forested parcels in the Fallen Leaf Lake and Camp Richardson/Baldwin Beach area of the Lake Tahoe Basin. The Sugar Pine Point State Park collection point is located within Sugar Pine Point State Park just south of Tahoma on the west shore of Lake Tahoe. Sugar Pine Point State Park is guided by a State Parks general plan, which includes goals and guidelines for forest management practices, including fuels treatment and clearing of material (State Parks 2005).

3.11.2 Discussion

a) Physically divide an established community?

No impact. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities for use as fuel in bioenergy generation, as raw material for wood products, or for use as home fuel for the Washoe Tribe. No ground-disturbing activities would be required to implement the project, as the proposed project is limited to chipping, loading, and hauling of material. Haul trucks and other vehicles would travel on existing, or previously implemented roadways. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader. No structures would be constructed that would have the potential to physically divide an established community. For these reasons and because of the temporary nature of the proposed project to load biomass into haul trucks, the proposed project would not physically divide an established community. There would be 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?

Less than significant. As described above under “Environmental Setting,” TRPA identifies the land use designations for loading and hauling sites as Conservation and Recreation. Chipping, loading, and hauling biomass in connection with forest fuels treatment activities would be a compatible use within these Recreation and Conservation areas under the existing land use designation and zoning. For these reasons, this would be a less-than-significant impact.

3.12 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Mineral Resources.				
Would the project:				
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"/>
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"/>

3.12.1 Environmental Setting

Mineral resources include oil, natural gas, and metallic and nonmetallic deposits, including construction aggregates. In California, mineral resource zones (MRZ) are mapped as one of four possible designations:

- ▶ areas of No Mineral Resource significance (MRZ-1);
- ▶ areas of Identified Mineral Resource significance (MRZ-2);
- ▶ areas of undetermined Mineral Resource significance (MRZ-3); or
- ▶ areas of Unknown Mineral Resource significance (MRZ-4).

No MRZ-2 areas are mapped (DOC 2001) in El Dorado County, where the fuels treatment activities are located, and no mineral resource recovery sites within the Lake Tahoe Basin are identified in the Lake Tahoe Regional Plan (TRPA 2012).

3.12.2 Discussion

- 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?**

No impact. The proposed project involves chipping, loading, and transport of approximately 17,500 tons of forest material generated by forest thinning projects on NFS and State Parks lands within the Tahoe Basin. Material would be hauled to regional receiving facilities for use as fuel in bioenergy generation, as raw material for wood products, or for use as home fuel for the Washoe Tribe. No ground-disturbing activities would be required to implement the project, as the proposed project is limited to chipping, loading, and hauling of material. Haul trucks and other vehicles would travel on existing, or previously implemented roadways. Temporary activities would include chipping and loading of biomass material from previously generated slash piles at collection points, and temporary access by light trucks and heavy-duty equipment, which includes one haul truck, one chipper, and one loader. No ground disturbance or changes in land use would be associated with the proposed project, and no activities would occur that may impede access to mineral resources, if they were identified in the future. Therefore, the project would not result in the loss of availability of known mineral resources that would be of value to the region and the residents of the state.

- b) **Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

No impact. There are no locally important mineral resource recovery sites delineated in the El Dorado County General Plan, TPRA Regional Plan, or other land use plan that include the loading and hauling sites for the proposed project. Therefore, implementation of the project would have no effect on the availability of known mineral resources, and no impact would occur.

3.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII.Noise.				
Would the project result in:				
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 in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.13.1 Environmental Setting

The collection points are located on forested lands within a variety of settings in the Tahoe Basin. The Meeks Creek Meadow and Sugar Pine Point State Park collection points are located in areas that are quiet compared to developed, urbanized areas in the Tahoe Basin. The South Tahoe Project treatment units are located on parcels throughout South Lake Tahoe and the surrounding area and are adjacent to a variety of land uses, including residential and mixed-use areas. The predominant noise source near all collection points is traffic traveling along the following routes: Pioneer Trail and U.S. 50 (at the South Tahoe Fuels Treatment Project collection points), SR 89 (at the South Tahoe Fuels Treatment Project and Meek Creek Meadow Restoration Project collection points), and SR 89 (at Sugar Pine State Park collection point). Roadway noise is muted near Meeks Creek Meadow and Sugar Pine Point State Park because of vegetation and topography. According to the TRPA 2015 Threshold Evaluation Report, traffic noise levels along SR 89 are not in attainment of their respective transportation corridor noise thresholds, while U.S. 50 is currently in attainment (TRPA 2016).

In developed areas near collection points, other nearby noise sources include landscape maintenance and snow removal activities (e.g., grass cutting, leaf blowing, snow plowing and blowing) at residential and commercial land uses; activities typical of urban and suburban environments, such as people recreating outside; and possibly motorized watercraft activity on the lake. Biomass loading and hauling may also occur concurrently with fuel treatment activities at loading sites, which would include the use of heavy equipment such as mechanical harvesters, masticators, chainsaws, and loaders.

The closest noise-sensitive receptors to the collection points would be single-family homes in neighborhoods adjacent to the South Tahoe Fuels Treatment Project parcels and the Sugar Pine Point State Park collection point, and the Meeks Bay Campground in Meeks Bay.

REGULATORY SETTING

Tahoe Regional Plan

The elements of the Tahoe Regional Plan related to noise include the following: Noise Subelement of the Goals and Policies of the Regional Plan (TRPA 2012); the TRPA Code of Ordinances (TRPA Code), Chapter 68, "Noise Limitations"; and plan area statements, community plans, and area plans. These elements are described below, followed by a summary of TRPA's region-wide traffic noise mitigation program.

Goals and Policies

The Noise Subelement of the Regional Plan Goals and Policies includes a goal to attain and maintain community noise equivalent level (CNEL) standards that are relevant to the project (Goal N-2) (TRPA 2012:2-26 through 2-28). The CNEL is 24-hour metric. More specifically, the CNEL is the energy average of the sound levels occurring over a 24-hour period, with a 10-decibel (dB) penalty applied to sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m. and a 5-dB penalty applied to the sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m. The underlying policy intended to help achieve Goal N-2 includes establishing specific site design criteria for projects to reduce noise from transportation corridors and which may include using earthen berms, and barriers (Policy N-2.1). The transportation corridor CNEL values override land use based CNELs within 300 feet of the applicable roadway (TRPA 2012).

Code of Ordinances

Chapter 68, "Noise Limitations," of the TRPA Code is intended to implement the Noise Subelement of the Goals and Policies document and to attain and maintain TRPA's noise-related threshold standards (shown below).

TRPA Code Section 68.4, "Community Noise Levels," states that TRPA shall use CNELs to measure community noise levels and that individual plan area statements shall set forth CNELs that shall not be exceeded by any one activity or combination of activities. The CNELs set forth in the plan area statements are based on the land use classification, the presence of transportation corridors, and the applicable threshold standard. Plan area statements (PASs) essentially provide plan CNELs and other planning standards specific to a local area within the Tahoe Region. Established CNELs for the PASs associated with loading sites for the proposed project are 50 and 55 dB.

Thresholds

TRPA has established threshold standards for nine resources, including noise. There are two noise threshold indicators: single noise events and cumulative noise events. Both types of noise thresholds are summarized below as context for the current environmental analysis.

Single Noise Events

A noise event can be defined as an unexpected increase in acoustic. Single Noise Event Threshold Standards adopted by TRPA are based on the numerical value associated with the maximum measured level in acoustical energy during an event. This threshold establishes maximum noise levels for aircraft, watercraft, motor vehicles, motorcycles, off-road vehicles, and snowmobiles.

Cumulative Noise Events

TRPA adopted CNEL standards for different zones within the Region to account for expected levels of serenity. The standards, established in the Goals and Policies, apply to the entire Lake Tahoe Basin. The noise limitations established in Chapter 68 of the TRPA Code do not apply to noise from TRPA-approved construction or maintenance projects, MOU exempt projects, or the demolition of structures, provided that such activities are limited to the hours between 8:00 a.m. and 6:30 p.m.

TRPA's transportation corridor CNEL thresholds override land use based CNELs within 300 feet of the applicable roadway (TRPA 2012). TRPA's transportation corridor noise thresholds for U.S. 50 and SRs 431, 28, 89, 207, and 267 override TRPA's land use based CNEL thresholds at all locations within 300 feet from the edge of the roadway.

El Dorado County Noise Ordinance

The noise standards for El Dorado County are stated in Section 130.37.060 of the El Dorado County Code, and are shown in Table 3-6, below. The El Dorado County noise standards for outdoor activity areas of different types of land uses. Section 130.37.20 of the noise ordinance exempts construction noise from all the county’s standards during daylight hours provided that all construction equipment is fitted with factory-installed muffling devices and maintained in good working order.

Table 3-6 El Dorado County Noise Ordinance Noise Level Standards for Sensitive Receptors^{1, 2, 3}

Noise Level Descriptor (dB) Community/Rural Centers	Daytime (7:00 a.m. to 10:00 p.m.) Rural Regions	Daytime (7:00 a.m. to 10:00 p.m.) Community/Rural Centers	Evening (7:00 a.m. to 10:00 p.m.) Rural Regions	Evening (7:00 a.m. to 10:00 p.m.) Community/Rural Centers	Nighttime (10:00 p.m. to 7:00 a.m.) Rural Regions	Nighttime (10:00 p.m. to 7:00 a.m.) Community/Rural Centers
Hourly L_{eq}	55	50	50	45	45	40
Maximum L_{max}	70	60	60	55	55	50

Notes: dB=decibel; L_{eq} = equivalent continuous noise level (average noise level) represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour equivalent sound level is the energy average of A-weighted sound levels occurring during a 1-hour period; L_{max} = maximum noise level or the highest instantaneous sound level measured during a specified period.

- ¹ Each of the noise levels specified above shall be lowered by 5 dBA for simple tone noises, noises consisting primarily of unamplified speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses, such as caretaker dwellings.
- ² The Director can impose noise level standards which are up to 5 dBA less than those specified above, based upon a determination of existing low ambient noise levels in the vicinity of the project site.
- ³ The exterior noise level standard shall be applied as follows:
 - a. In Community Regions, at the property line of the receiving property;
 - b. In Rural Centers and Regions, at a point 100 feet away from a sensitive receptor or, if the sensitive receptor is within the Platted Lands Overlay (-PL) where the underlying land use designation is consistent with Community Region densities, at the property line of the receiving property or 100 feet away from the sensitive receptor, whichever is less; or
 - c. In all areas, at the boundary of a recorded noise easement between affected properties.

Source: Data provided by El Dorado County in 2020

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 in other applicable local, state, or federal standards?

Less than significant. The project would consist of the use of equipment, including chain saws, a loader, a chipper, and a haul truck. It is assumed that the noise levels generated by these types of equipment would be similar to noise levels generated by standard construction equipment, as listed in Table 3-7.

Table 3-7 Noise Emission Levels from Equipment Associated with the Proposed Project

Equipment Type	Typical Noise Level (dB) @ 50 Feet ¹
Chain Saw	85
Loader	80
Trucks	74–88
Chipper	75 ²

Notes: Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacture-specified noise levels for each piece of heavy construction equipment.

¹ Reference noise levels from FTA 2006 except where indicated otherwise.

² Berger et al. 2010.

Sources: FTA 2006; Berger et al. 2010

As stated above, the closest noise-sensitive receptors to proposed project activities would be single-family homes directly adjacent to Sugar Pine Point State Park and the South Tahoe Fuels Treatment Project collection points. Thus, noise-sensitive receptors could, at times, experience elevated noise levels. As is the nature of such chipping, loading, and hauling activities, equipment would not be operated in the same location for more than a few days and would more than likely only be operated for only one or two days at any one site. Thus, any increase in noise exposure at nearby receptors would be temporary and periodic.

Moreover, as stated in Chapter 2, "Project Description," all the equipment used for forest treatment would be maintained in good working order, which would include factory-installed muffler devices and all chipping and loading activities associated with the proposed project would occur during daytime hours (between 8:00 a.m. and 5:00 p.m.) and thus be exempt from the noise thresholds and standards set in the El Dorado County noise ordinance and consistent with the TRPA's Best Construction Practices Policy for the Minimization of Exposure to Construction-Generated Noise and Ground Vibration. Therefore, chipping and loading activities would not result in the exposure of persons to or generation of noise levels in excess of applicable standards.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant. The proposed project would not result in the long-term operation of a source of ground vibration. In addition, the project would not develop new vibration-sensitive receptors. Chipping and loading activities would not include the types of equipment or activities that have the potential to generate high levels of ground vibration as such activities do not involve ground disturbance or excavation of any kind. Heavy equipment would not operate close enough to residences or other structures such that they would be exposed to noticeable levels of ground vibration. Therefore, this impact would be less than significant.

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?

No impact. The proposed project would not result in the long-term operation of any stationary noise sources, result in a long-term increase in noise-generating motor vehicle trips, or develop or relocate of noise-sensitive receptors. As discussed in item (a), noise-generating heavy equipment used for chipping, loading, and hauling would not be operated in the same location for more than a few days. Therefore, the proposed project would not result in a permanent increase in ambient noise levels in the project vicinity and would have no impact on permanent ambient noise levels. There would be no impact.

3.14 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Population and Housing.				
Would the project:				
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"/>
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"/>

3.14.1 Environmental Setting

The Regional Plan is a blueprint for growth in the Tahoe Basin. The plan anticipates a potential population increase of 5,900 year-round residents by 2035 and does not provide for new tourist accommodation units within the Basin. The planned rate of population growth in the area is low.

Generally, collection points are in proximity to existing residential and recreation uses. Meeks Meadow is adjacent to urbanized development, developed recreation sites, and an area of concentrated public use. The South Tahoe Fuels Treatment Project parcels are dispersed across NFS lands on the south shore of Lake Tahoe in El Dorado County. Sugar Pine Point State Park is located on the west shore of Lake Tahoe adjacent to residential areas. There is no housing located within any of collection points.

3.14.2 Discussion

- 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)?**

No impact. The project involves the loading and transport of approximately 17,500 tons of forest material generated by previously approved forest thinning activities on NFS and State Parks lands within the Lake Tahoe Basin. The proposed project would provide local, short-term and temporary employment commensurate with the effort required for disposal of biomass through the processes previously analyzed for the forest fuels treatment project sites. No additional permanent staff would be needed for operation of the biomass facilities or wood products processing facility. Employment needs for the project would be met by existing forestry contractors and biomass facility staff. There would be no impact.

- b) **Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

No impact. The project would not result in physical land disturbance or land use changes that have the potential to displace people or housing. Although chipping and loading of materials could occur at collection points in proximity to existing residential and recreation uses, these activities would be consistent with ongoing vegetation management activities and would occur at locations established by the previously analyzed and approved forest fuels treatment activities. There would be no impact.

3.15 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Public Services.				
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.15.1 Environmental Setting

FIRE PROTECTION

Five local fire protection districts are charged with providing fire protection, rescue, emergency medical treatment, hazardous materials control and response services in the vicinity of collection points:

- ▶ City of South Lake Tahoe Fire Department,
- ▶ Lake Valley Fire Protection District,
- ▶ Fallen Leaf Lake Fire District,
- ▶ Meeks Bay Fire Protection District, and
- ▶ North Tahoe Fire Protection District.

In addition, portions of the Lake Tahoe Basin are within State Responsibility Areas, which are identified by the State Board of Forestry as areas for which CAL FIRE has the primary duty for wildland fire prevention and suppression. Areas on National Forest System (NFS) lands are under the jurisdiction of LTBMU.

The Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy for the Lake Tahoe Region (Fuel Reduction Strategy) provides land management, fire, and regulatory agencies with strategies to reduce the probability of a catastrophic fire in the Region (USDA 2014). Under the Fuel Reduction Strategy, fire prevention, fire protection, and emergency services in the Tahoe Region are provided by various agencies and fall under federal, state, and local jurisdiction.

POLICE PROTECTION

Law enforcement within the Lake Tahoe Basin is provided at the federal, state, county, and city levels. At the community level, police protection services are provided by the El Dorado County Sheriff Department. In addition to local law enforcement agencies, State Parks and LTBMU have their own law enforcement units, and the Tahoe region is also served by the U.S. Coast Guard and State Highway Patrols.

SCHOOLS

Two kindergarten through grade 12 public school districts serve the Lake Tahoe Basin within the area of the proposed project, the Tahoe Truckee Unified School District and Lake Tahoe Unified School District.

PARKS

Several parks that serve local residents and visitors are located in the vicinity of the loading and hauling sites. Sugar Pine Point State Park and Meeks Bay are two popular recreation destinations and collection points at both are included in the proposed project. Additional recreation facilities within the vicinity of the proposed project are identified in Section 3.16, "Recreation."

3.15.2 Discussion

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:**

Fire protection?

Less than significant. The proposed project would involve chipping, loading, and transport of approximately 17,500 green tons of forest material generated by previously approved forest thinning activities on NFS and State Parks lands within the Lake Tahoe Basin. The project duration would be temporary, completed over either two or three field seasons (approximately May through November, but could occur over the winter as well, as weather conditions permit), during 2020, 2021, and 2022. As described above, collection points are served by the multiple fire response agencies.

Implementation of the project would result in the use of mechanical equipment within vegetated and forested areas with a very high fire hazard (see Section 3.20, "Wildfire"). Heat or sparks from vehicles or equipment activity (e.g., chainsaws and chippers) could ignite dry vegetation and cause a fire. The use of mechanical equipment as part of loading and hauling activities at sites adjacent to forested areas could pose a temporary increased risk of fire that could result in a short-term increase in demand for fire protection services from the above-identified fire response agencies. However, operations crews would be trained in and follow fire prevention and suppression measures while implementing project activities, equipment would be outfitted with spark arresters and fire suppression equipment, and crews would be required to park in designated areas, away from flammable material such as dry brush or grass. Therefore, impacts would be less than significant.

Police protection?

No impact. The proposed project would involve chipping, loading, and transport of approximately 17,500 green tons of forest material generated by previously approved forest thinning activities on NFS and State Parks lands within the Lake Tahoe Basin. The project duration would be temporary, completed over either two or three field seasons (approximately May through November, but could occur over the winter as well, as weather conditions permit),

during 2020, 2021, and 2022. The project would temporarily introduce workers and equipment to collection points. No structures would be developed at the loading and hauling sites. There is no evidence to suggest the proposed project would result in an increase in demand for police protection over existing conditions such that new or expanded facilities would be necessary to maintain current service levels. Therefore, there would be no impact.

Schools?

No impact. The proposed project would involve chipping, loading, and transport of approximately 17,500 green tons of forest material generated by previously approved forest thinning activities on NFS and State Parks lands within the Lake Tahoe Basin. These activities would be temporary and would not directly affect any school facilities. In addition, the proposed project does not include development of new residences and would not result in permanent creation of jobs. For these reasons, the proposed project would not result in an increase in demand for educational services and, consequently, would not result in the need for new or physically altered schools. Therefore, there would be no impact.

Parks?

Less than significant. See discussion under items (a) and (b) in Section 3.16, "Recreation." The proposed project would not result in a permanent increase in demand for park facilities that would result in the need for new or physically altered park facilities. Therefore, impacts would be less than significant.

Other public facilities?

No impact. The proposed project does not include development of new residences and therefore would not increase the population near the loading or hauling sites that would increase the demand for other public facilities, such as libraries and community centers. The proposed project would provide local, short-term and temporary employment commensurate with the effort required for processing, loading, and transport of biomass. No additional permanent staff would be needed for operation biomass or wood processing facilities. Employment needs for the project would be met by existing forestry contractors and receiving facility staff. Therefore, implementation of the project would have no impact on these other public services.

3.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Recreation.				
Would the project:				
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 checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.16.1 Environmental Setting

The recreation opportunities in the Lake Tahoe Basin are abundant due to the diverse terrain and topography. Recreation activities generally associated with the forest and meadows where project activities could take place include hiking, camping, horseback riding, mountain biking, snow shoeing, skiing, and snowboarding. LTBMU operates and maintains 350 miles of NFS trails and 250 miles of NFS roads (TRPA 2017), used by mountain bikers, hikers, and LTBMU personnel. The paved trail network currently includes approximately 50 miles of shared-use paths, 44 miles of bicycle lanes, and 23 miles of sidewalks (TRPA 2017).

The Lake Tahoe Basin is home to nearly 55,000 full-time residents and is a recreational destination with 4–6 million visitors each year (TRPA 2017), including many who live in nearby metropolitan centers. Tourism is an important part of the local economy and a high-quality recreation experience coupled with abundant recreation opportunities is important to maintain tourism.

The collection points at Meeks Creek Meadow are near bike trails, urbanized development, developed recreation sites such as the Meeks Bay Campground, and an area of concentrated public use. NFS roads 14N44 and 14N42 run along the boundaries of the Meeks Creek Meadow and are used by hikers and nature viewers as weather permits. These NFS roads are directly connected to collection points that would be used in connection with the proposed project. Additionally, NFS road 14N42 is also used as the first leg of the Tahoe Yosemite Trail, which leads to a northeastern entrance to Desolation Wilderness.

The areas surrounding the South Tahoe Fuels Treatment Project parcels are home to numerous trails and NFS roads. These trails see a variety of recreational uses, including hiking, mountain biking, snowshoeing, camping, and horseback riding.

The service roads and trails within Sugar Pine Point State Park are used for hiking, biking, and cross-country skiing during appropriate seasons of the year.

3.16.2 Discussion

- 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?**

Less than significant. The project would occur on or near lands that are used for recreation in the Lake Tahoe Basin. Loading and chipping of biomass would occur concurrently with forest fuels treatment activities. During chipping and loading activities, portions of some roads and trails would be closed temporarily and for short durations. It is possible that project activities could prolong the time where certain areas may remain inaccessible to the recreating public. Equipment would not be operated in the same location for more than a few days and would generally only be operated for only one or two days at any one site. During this time, people may go to other areas for recreational opportunities. However, recreational opportunities near the project sites are abundant, and alternative access points are available for many of the roads and trails located nearby. Use of other facilities would therefore be minor and dispersed and would not cause substantial physical deterioration. Hauling activities would use existing roadways and would not affect recreation. Therefore, impacts would be less than significant.

- b) **Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

No impact. The proposed project does not include construction or expansion of recreational facilities. There would be no impact.

3.17 TRANSPORTATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Transportation.				
Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.17.1 Environmental Setting

Slash piles at the above collection points would be accessed by equipment and workers via existing roads. The slash pile at the Sugar Pine Point State Park collection point is within a developed, paved area and is accessible by paved road. Slash piles at the collection points in Meeks Creek Meadow would be accessed by existing, unpaved Forest Service roads; and slash piles at the collection points in the South Tahoe fuels treatment area would be accessed by a combination of local connector streets, and existing, paved or unpaved Forest Service roads. Traffic generated by the project would travel on local connector streets and state and interstate highways. No new roads or landings would be developed to accommodate the activities associated with the proposed project.

Possible highway travel routes include:

- ▶ U.S. 50 from South Lake Tahoe to the junction with SR 49 in California;
- ▶ SR 49 along segments from the Loyalton Biomass facility to the junction with SR 89, and between the town of Auburn and the Ampine wood products facility in Sutter Creek, California;
- ▶ SR 89 along the segment from the junction with SR 49 to the junction with SR 88;
- ▶ SR 88 along the segment from the junction with SR 89 to the Ampine wood products facility in Sutter Creek, California;
- ▶ SR 193 along the segment from the junction with I-80 to the Sierra Pacific Industries Lincoln facility in Lincoln, California;
- ▶ SR 65 along the segment from the junction with I-80 to the Sierra Pacific Industries Lincoln facility in Lincoln, California;
- ▶ I-80 from the junction with SR 89 to the junction with SR 65.

There are currently no parking areas at collection points and no new parking areas are proposed. During implementation of the proposed project, employees would park along existing roads at designated, safe access points to project loading sites.

LAKE TAHOE REGIONAL PLAN

Chapter 3, Transportation Element, of the Regional Plan provides goals and policies that are intended to establish a safe, efficient, and integrated transportation system that provides quality mobility options for all sectors of the population, supports the region's economic base, enhances quality of life, and maximizes opportunities for environmental benefits.

REGIONAL TRANSPORTATION PLAN

Linking Tahoe: Regional Transportation Plan (RTP) is Lake Tahoe's blueprint for a regional transportation system that enhances the quality of life in the Tahoe Region, promotes sustainability, and offers improved mobility options for people and goods (TRPA 2017). The 2017 Regional Transportation Plan builds on the transportation system planning efforts of the 2012 RTP by focusing on providing frequent and prioritized multimodal connections between town centers and neighborhoods and easy and convenient access to high demand recreation sites. The long-term vision of the RTP is of a well-connected, internal and external transportation system that meets the demands of all users. The RTP presents six goals that draw from the 2015 Intelligent Transportation Systems Strategic Plan and the 2016 Active Transportation Plan and reflect the requirements of the TRPA Bi-State Compact, federal and state transportation planning requirements and plans such as the California Transportation Plan, and public input. Each goal is accompanied by performance measures that are routinely assessed for efficacy and refined to ensure that TRPA continues to monitor and analyze the right data to inform decision making.

CALIFORNIA DEPARTMENT OF TRANSPORTATION

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the state highway system and ramp interchange intersections. Caltrans is also responsible for highway, bridge, and rail transportation planning, construction, and maintenance.

Caltrans provides guidance to local agencies on assessing the performance of rural roadways to enhance safety, mobility, accessibility and productivity under continued use. Caltrans requires transportation permits for the movement of vehicles or loads exceeding the limitations on the size and weight contained in Division 15, Chapter 5, Article 1, Section 35551, of the California Vehicle Code. Project activities would require temporary and short-term use of state and locally managed roadways; and thus, Caltrans guidance and standards specifically related to the performance of rural state roadways and vehicle size and weight limitations would apply to the project.

California Manual on Uniform Traffic Control Devices

This *California Manual on Uniform Traffic Control Devices* (California MUTCD) is published by Caltrans and is issued to adopt uniform standards and specifications for all official traffic control devices in California. Temporary traffic control (TTC) applies when the normal function of the roadway, or a private road open to public travel, is suspended and is intended to provide for the reasonably safe and effective movement of road users through or around TTC zones while reasonably protecting road users, workers, responders to traffic incidents, and equipment. TTC planning provides for continuity of the movement of motor vehicle, bicycle, and pedestrian traffic (including accessible passage); transit operations; and access to property and utilities. TTC plans should be prepared by persons knowledgeable about the fundamental principles of TTC and work activities to be performed, and the design, selection, and placement of TTC devices for a TTC plan should be based on engineering judgment (Caltrans 2014). California MUTCD TTC standards and specifications could apply to TTC required for the project.

BICYCLE AND PEDESTRIAN FACILITIES

NFS roads 14N44 and 14N42 run along the boundaries of the Meeks Creek Meadow project area and are used by hikers and nature viewers as weather permits. Additionally, 14N42 is also used as the first leg of the Tahoe Yosemite Trail, which leads to a northeastern entrance to Desolation Wilderness.

The South Tahoe Project consists of dispersed sites located on NFS lands on the South Shore of Lake Tahoe in El Dorado County. The sites are located in the WUI and general forest. Several of the sites border on TRPA scenic travel routes on Pioneer Trail (TRPA Unit 45, Pioneer Trail North, and Unit 46, Pioneer Trail South) and SR 89 (TRPA Unit 2, Camp Richardson).

3.17.2 Discussion

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than significant. Implementation of the proposed project would result in loading and hauling of biomass at the LTBMU and State Parks collection points over either two or three field seasons (approximately May through November, but could occur over the winter as well, as weather conditions permit), during 2020, 2021, and 2022. Work and haul trips would occur on weekdays. Work-related trips would include employee trips as well as haul trips for moving equipment, materials, and biomass. The proposed project would result in a temporary increase in the number of vehicles, which would include up to six employee vehicles, one haul truck, and one chip van per day on regional state and interstate highways, and other local roads during loading and hauling activities. Employees would arrive in the morning and park at an access point to the collection point and leave in the evening. It is anticipated that forest treatments would result in no more than 12 employee trips per day (six morning trips and six evening trips by each employee), six trips for hauling chipped biomass per day (three trips to the project area and three trips leaving the project area), and two trips made by the chipper per day (one trip to the project area and one trip leaving the project area). The haul trucks and chipper entering and exiting collection points would be dispersed throughout the day.

As detailed above, the project would result in a maximum of 20 total daily trips; and thus, no substantial short-term vehicle trip generation (more than 110 trips/day) would result from the project. Haul trucks entering and exiting California state routes and operating on the roadway network would be slow-moving and could temporarily slow down traffic. However, these trucks would only operate on the existing public roadway network and would be required to operate consistent with any applicable vehicle weight and size limitations. Therefore, the traffic generated by the project would not adversely affect any existing or planned public transit, bicycle, or pedestrian facilities. Additionally, project-generated trips would be temporary and intermittent in nature. During chipping and loading activities, public access to collection points and road sites would be blocked using flagging tape and signs and flags would be posted at work site access points to notify the public of activities and prevent access and avoid potential conflicts between hikers and project vehicles. For these reasons, the project would generate no additional long-term traffic, would not substantially affect the performance of the circulation system, and would not generate conflict between various uses and would therefore not conflict with any applicable transportation plans, ordinances, or policies. This impact would be less than significant.

b) Conflict or be inconsistent with State CEQA Guidelines Section 15064.3(b), which pertains to vehicle miles traveled?

Less than significant. State CEQA Guidelines Section 15064.3(b) identifies criteria for analyzing the transportation impacts of a project, including land use projects (Section 15064.3[b][1]) and transportation projects (Section 15064.3[b][2]). The project is not a land use or transportation project, so neither of these sections apply.

The Technical Advisory on Evaluating Transportation Impacts (OPR 2018) notes that projects generating or attracting fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact, absent substantial evidence indicating otherwise (OPR 2018). As detailed in item (a) above, the project is anticipated to generate vehicle trips consisting of worker, and material and equipment haul trips which would occur on a temporary and intermittent basis. Therefore, the project is generally consistent with construction activities in terms of the temporary nature of activities, trip generation characteristics, and types of vehicles and equipment required. Additionally, as detailed in (a) above, the project would generate a maximum of 20 daily trips. Using OPR guidance, because the project would generate fewer than 110 trips per day, it can be assumed to result in a less-than-significant

impact to VMT. Therefore, the project would not conflict or be inconsistent with State CEQA Guidelines Section 15064.3(b). This impact would be less than significant.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than significant. The project area consists of undeveloped, forested land owned and managed by public agencies (and in the case of Meeks Creek Meadow by the Washoe Tribe) and open to the public for passive recreation uses. The project would include travel on NFS roads, local streets, and state highways. The project would not include the construction of roads, or any changes in roadway design. Appropriate access to public areas would be provided by the existing roadway network. In addition, the proposed project does not include design features that would increase existing hazards such as sharp curves or dangerous intersections.

Up to an estimated six employee vehicles could be parked in designated, legally allowable locations along existing roads adjacent to the project area. These areas would likely be similar to parking locations already used by recreationists that access these trails. Because these trail access points would likely be closed during treatment activities there would not be a need for available parking for recreation users.

The project would introduce large vehicles (i.e., one chipper and one haul truck per day) on local roads through neighborhoods as they access collection points and haul away material. Chippers are medium-heavy duty trucks with a Gross Vehicle Weight Rating (GVWR) of greater than 26,000 pounds. Haul trucks are heavy-duty vehicles with a manufacturer's GVWR greater than 33,000 pounds. Although these roads are not intended for use as a thoroughfare for chip vans and haul trucks, the presence of these trucks in the neighborhoods between the project area and on state highways would be a maximum of two trips per day (one entering and one exiting the site) for the chipper, and a maximum of six trips per day for the haul truck (three trips to the project area and three trips leaving the project area) for up to 3 years. The presence of a haul truck and chipper traveling on local roads could increase hazards in neighborhoods; however, trips by these vehicles would be limited as indicated above. Additionally, these truck trips would only occur on the existing public roadway network and would be required to operate consistent with any applicable vehicle weight and size limitations; thus, ensuring the trucks trips are compatible with the roadway facilities they would operate along.

Additionally, during chipping and loading activities, public access to collection points and road sites would be blocked using flagging tape and signs and flags would be posted at work site access points to notify the public of activities and prevent access, and alternative access route information would be provided if needed at work sites. Such signs would alert drivers or other travelers to trucks turning in and out of work sites. Additionally, because the public access to landing and road sites would be blocked during project activities, there is no potential for vehicular conflicts between project-generated heavy-duty truck trips and passenger vehicles along these roadways. For these reasons, this impact would be less than significant.

d) Result in inadequate emergency access?

Less than significant. Transportation vehicles would remain on preexisting roadways and NFS roads, and no road modifications or construction would occur. Biomass would be hauled using local roads and highways receiving facilities. These project activities would not restrict access to or block any road outside of the project area, and although closed to the public, access to landing and road sites during project activities would be maintained for emergency vehicles. In the event of an emergency, the project and personnel would comply with appropriate local and regional emergency response plans. For these reasons, this impact would be less than significant.

3.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources.				
Has a California Native American Tribe requested consultation in accordance with Public Resources Code Section 21080.3.1(b)?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
Would the project 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 that is:				
a) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.18.1 Environmental Setting

Collection points for the South Tahoe Fuels Treatment Project, where chipping and loading would occur, range from approximately 1 to 3 acres per site and would be cleared and implemented prior to implementation of the proposed project, as described in Section 2.1, "Project Overview." The collection point at Sugar Pine Point State Park is entirely paved, and is accessed by a paved road. As such, these areas are disturbed sites with almost no potential to contain tribal cultural resources (TCRs).

The following describes the TCRs context for the Meeks Creek Meadow Project. Meeks Meadow is, in its entirety, a cultural place of significance for the Washoe Tribe of Nevada and California (Lahontan Water Board 2019b:131). The Meeks Creek Meadow Project would be implemented through a partnership between the Washoe Tribe and LTBMU established through a series of memorandums of understanding and cooperative agreements. The Washoe Tribal Council, Tribal Historic Preservation Officer, Washoe Cultural Resource Advisory Council, and tribal elders were consulted as part of the forest fuels treatment project at Meeks Meadow, participated in and provided funding for planning and design, and provided input on the project goals, objectives, and Cultural Management Plan developed for the project. The Meeks Creek Meadow Project will therefore allow the Washoe Tribe to actively participate and manage aboriginal lands in a historic and traditional manner in cooperation with LTBMU (Lahontan Water Board 2019:1). Washoe Tribe monitors will be onsite during preparation of collection points and temporary roads that would be used in connection with the proposed project.

ASSEMBLY BILL 52

Assembly Bill (AB) 52, signed by Governor Edmund G. Brown, Jr. in September 2014, established a new class of resources under CEQA: TCRs. AB 52, as provided in Public Resources Code (PRC) Sections 21080.3.1, 21080.3.2, and 21082.3, requires that lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation once the lead agency determines that the application for the project is complete, prior to the issuance of a notice of preparation (NOP) of an environmental impact report (EIR) or notice of intent to adopt a negative declaration or mitigated negative declaration.

AB 52 applies to those projects for which a lead agency issues a NOP of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration on or after July 1, 2015. Therefore, the requirements of AB 52 apply to the proposed project. Accordingly, on February 10, 2020, the Conservancy sent letters describing the project and a project map to tribes that had requested notification. Correspondence in compliance with AB 52 is summarized in Table 3-8 below. No responses were received within 30 days from any of the tribes.

Table 3-8 Summary of Native American Outreach

Native American Contact Name and Group	Date of Initial Letter	Date(s) Reply Received
Michael Mirelez, Cultural Resources Coordinator, Torres Martinez Desert Cahuilla Indians, P.O. Box 1160 Thermal, CA 92274	February 10, 2020	None received
The Honorable Serrell Smokey, Chairman, Washoe Tribe of Nevada and California, 919 U.S. Highway 50 South Gardnerville, NV 89410	February 10, 2020	None received
The Honorable Gene Whitehouse, Chairman, United Auburn Indian Community of the Auburn Rancheria, 10720 Indian Hill Rd. Auburn, CA 95603	February 10, 2020	None received

Source: Compiled by Ascent Environmental in 2020

3.18.2 Discussion

Would the project 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 that is:

- a) 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
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of 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?

No impact. The proposed project involves the chipping, loading and transport of approximately 17,500 tons of forest material generated by forest thinning activities on NFS and State Parks lands within the Lake Tahoe Basin. Collection points where the proposed chipping and loading would occur would be cleared as part of fuels treatment activities prior to the start of the proposed project, and no ground-disturbing activities are proposed to implement the proposed project. Haul trucks and other vehicles would remain on preexisting roadways and NFS roads.

Additionally, in compliance with AB 52, the Conservancy sent letters to California Native American Tribes as shown in Table 3-8. Because no tribes responded, there was no consultation. This attempt at consultation resulted in the conclusion that there are no resources on the proposed project site considered to be TCRs as described under AB 52 and defined in PRC Section 21074.

As defined in PRC Section 21074, to be considered a TCR, a resource must be either:

1. Listed or determined to be eligible for listing, on the national, state, or local register of historic resources, or
2. A resource that the lead agency determines, in its discretion and supported by substantial evidence, to treat as a tribal cultural resource pursuant to the criteria in PRC Section 50241(c). PRC Section 5024.1(c) provides that a resource meets criteria for listing as an historic resource in the California Register if any of the following apply:
 - (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
 - (2) Is associated with the lives of persons important in our past.
 - (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
 - (4) Has yielded, or may be likely to yield, information important in prehistory or history.

Collection points are located within the traditional territory of the Washoe Tribe. The collection point in Sugar Pine Point State Park and the South Tahoe Fuels Treatment Project parcels are not known to have any special use. Meeks Meadow is of distinctive importance to the Washoe Tribe, as described above. However, because no new ground disturbance would occur at any of the collection points or along roadways used during implementation of the proposed project, the proposed project would have no impact on TCRs as defined in PRC Section 21074.

3.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. Utilities and Service Systems.				
Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication 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"/>
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"/>
c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project’s projected demand, in addition to the provider’s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.19.1 Environmental Setting

Collection points associated with the proposed project are located on undeveloped forest land that is not served by utilities. There is no municipal or other formal drainage system.

3.19.2 Discussion

- a) **Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?**

No impact. The proposed project would involve the loading and transport of biomass generated by previously approved forest thinning activities on NFS and State Parks lands within the Lake Tahoe Basin. These areas are generally not served by utilities and have minimal utility infrastructure. All ground disturbance, including establishing collection points and access roads, would be established prior to initiation of the biomass transport proposed project through the previously approved forest fuels treatment activities. Transport vehicles would use pre-existing roadways

and Forest Service roads. Therefore, the proposed project would not have the potential to conflict with existing facilities such that relocation would be required. Additionally, the biomass transport activities would not require water, wastewater, stormwater, electric, natural gas, or telecommunication service. Utility demand at the biomass conversion facilities is assumed to remain consistent with the demand generated by current operations because material from the proposed project would not result in an increase in daily process volume. Biomass in the form of mulch to be used at electricity generation facilities or pulp to be used in the generation of wood products would constitute normal feedstock at these facilities and would be replaced by other feedstock if the proposed project did not occur. The construction of new facilities would not be required. Therefore, there would be no impact.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

No impact. As discussed above, the chipping, loading, and transport of biomass generated by fuel treatment activities would not result in demand for water. There would be no reasonably foreseeable development as a result of the proposed project. Moreover, water use at biomass conversion facilities and at the Ampine Wood Products facility is assumed to remain within the demand generated by current operations because material from the proposed project would be a component regular feedstock to the biomass facility and would not result in an increase in daily process volume. Therefore, there would be no impact.

c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?

No impact. The proposed project would not generate wastewater through the shipping, loading, or transport of biomass. In addition, the biomass electricity generation facilities have capacity to accept the 17,500 tons of forest biofuel in the form of biomass from the proposed project within their permitted capacities. The biomass cogeneration facilities' wastewater and storm water discharges are permitted under existing General Industrial Storm Water Discharge Permits. Therefore, there would be 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?

No impact. The proposed project would not generate solid waste. All biomass materials removed from the treatment sites would be transported to the biomass conversion facilities, the Ampine Wood Products facility, or to the Washoe Tribe headquarters for use as home heating fuel. Biochar would be generated by as a waste product of converting biomass from the proposed project area into energy. If there is no market for use of biochar, then the biochar would be disposed of at a permitted landfill in accordance with ongoing facility operation and as previously analyzed in the respective facilities' environmental permitting processes. To the extent that the conversion of the biomass at the biomass conversion facilities generate solid waste, the proposed project would not affect the waste generation rates of the facility because the proposed project would not result in a change in the types or volumes of materials being processed. Therefore, there would be no impact.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No impact. The proposed project (i.e., the chipping, loading, and transport of biomass) would not generate solid waste subject to federal, state, or local management and reduction statutes and regulations related to solid waste. All biomass materials removed from the treatment sites would be transported to the biomass conversion facilities, the Ampine Wood Products facility, or to the Washoe Tribe headquarters for use as home heating fuel. As described above, the proposed project would not alter the type or volume of materials processed at the biomass conversion facilities. Therefore, there would be no impact.

3.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire.				
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
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"/>
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"/>
c) Require the installation 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 type="checkbox"/>	<input checked="" type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>

3.20.1 Environmental Setting

Wildfires are a significant threat in California, particularly in recent years as the landscape responds to climate change and decades of fire suppression. Wildfire behavior is a product of several variables, primarily weather, vegetation, topography, and human influences, which intermix to produce local and regional fire regimes that affect how, when, and where fires burn. The fire regime in any area is defined by several factors, including fire frequency, intensity, severity, and area burned. As climate change persists, it will produce increasing temperatures and drier conditions that will generate abundant dry fuels. All wildfires (those initiated by both natural and manmade sources) tend to be larger under drier atmospheric conditions and when fed by drier fuel sources (Balch et al. 2017). It is estimated that since 1985, more than 50 percent of the increase in the area burned by wildfire in the western U.S. is attributable to anthropogenic climate change (Abatzoglou and Williams 2016).

Circumstances in California have made the environment particularly vulnerable to human-caused fires with expansion of the WUI and introduction of more people in areas susceptible to wildfire at all times of the year. A 2018 study indicates that the number of houses in the WUI increased nationwide by 41 percent between 1990 and 2010 (Radeloff et al. 2018). Between 1992 and 2012, 82 percent of wildfires in the U.S. were started by human causes (Balch et al. 2017). Three of the four variables controlling wildfire behavior described above (weather, vegetation, and human influence) are rapidly changing in California, in a manner that produces a fire regime and exposure to wildfire risk where community fire danger is increasing. Warming, frequent droughts, and the legacy of past management policies, combined with the increase in development and expansion of the WUI, have increased the risk of catastrophic damage during wildfires, which poses a substantial threat and cost to society. All but one of the proposed project sites are located in a WUI.

In response, contemporary fire management practices include fuel management activities that are intended to reduce the intensity and severity of wildfires. Reduced intensity also means that suppression efforts are more likely to be effective and can be conducted more safely in areas where wildfires are unwanted or threaten communities (DOI and USDA 2014). Fuels treatment activities have proven successful where they are targeted at protecting specific resources in limited geographic areas, such as in areas of extreme fire danger or in the WUI (Loudermilk et al. 2014). Another study found simulated fuel treatments in the Lake Tahoe Basin returned the forest to more historic and fire resilient conditions, reduced wildfire risk and severity, controlled wildfire carbon emissions, and in the long run, resulted in a net carbon gain (Loudermilk et al. 2014)

3.20.2 Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than significant. The proposed project would involve chipping, loading, and transport of forest material generated by previously approved forest thinning activities on NFS and State Parks lands within the Lake Tahoe Basin. Material would be hauled to receiving facilities within the region for use as biofuel in electricity generation, pulp for use in wood products, or as firewood for home heating fuel. During chipping and loading activities, public access to collection points and road sites would be blocked using flagging tape and signs and flags would be posted at work site access points to notify the public of activities and prevent access, and alternative access route information would be provided if needed at work sites. Therefore, these activities would not block emergency access routes or interfere with emergency evacuation plans. Hauling and crew travel would occur along highways local streets and would merely add one haul truck and up to six vehicles along these streets per day, which would not impair emergency access or emergency evacuation plans. This impact would be less than significant.

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?

Less than significant. Proposed project activities would use one haul truck, one wood chipper, a chainsaw and up to six worker vehicles. These vehicles and equipment may release a spark, which could result in wildfire ignition. Chippers would be outfitted with spark arrestors. Landing sites and roads where chipping and loading would occur would have been cleared prior to the start of the proposed project, either because such areas would be preexisting sites, or because the development of such sites has been approved and would be implemented under prior authorizations, as described above. As a result, there would be minimal or no vegetation in the area, thereby reducing the chance of igniting a wildfire. Crews would also carry with them standard fire suppression equipment. For these reasons, the exacerbation of wildfire risk from implementation of the proposed project that would expose receptors to pollutant concentrations would be less than significant.

c) Require the installation 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?

No impact. Collection points where chipping and loading would occur would be cleared prior to the start of the proposed project. No new roads, structures, or features would be constructed specifically for chipping and hauling activities. There would be 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?

No impact. The proposed project would not significantly exacerbate wildfire risk, as described for item (b), above. Therefore, wildfire is not expected, and people and structures would not be exposed to these post-fire hazards. There would be no impact.

3.21 CUMULATIVE IMPACTS AND MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.21.1 Cumulative Setting

Section 15130(a) of the State CEQA Guidelines requires a discussion of the cumulative impacts of a project when the project’s incremental effect is cumulatively considerable. Where a project’s incremental effect is not cumulatively considerable, the effect need not be considered significant, but the basis for concluding the incremental effect is not cumulatively considerable must be briefly described. Cumulatively considerable, as defined in State CEQA Guidelines Section 15065(a)(3), means that the “incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.” State CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Probable existing and future projects considered in the cumulative analysis are in the project vicinity of or are related to the proposed project, and/or have the possibility of being implemented within the same timeframe as the proposed Biomass Transport and Utilization Project to generate a cumulative impact. Cumulative projects considered in combination with the Biomass Transport and Utilization Project include: the three forest fuels treatment activities from which biomass would be chipped, loaded, and hauled offsite; other nearby fuels treatment initiatives including those that could be implemented under the Program Timberland fuels treatment program in the Lake Tahoe Basin or other individual fuels treatment activities; and local construction projects along the proposed routes for hauling biomass that could be implemented concurrently with the proposed project.

The treatment activities identified for biomass removal include the Meeks Creek Meadow Restoration Project, the South Tahoe Fuels Treatment Project, and State Parks' annual forest thinning program implemented under the Fuels Reduction and Understory Burning Project. Biomass generated by these forest fuels treatment activities would be removed from collection points under the proposed project. A description of each of the three forest fuels treatment activities is provided below.

- ▶ Meeks Creek Meadow Restoration Project. The Washoe Tribe and the U.S. Forest Service, LTBMU have approved a project to restore approximately 300 acres of meadow habitat in Meeks Meadow through conifer removal and use of prescribed fire. The project will reduce forest fuels by removing encroaching conifers and reintroducing periodic burning as an ongoing meadow management tool. Meeks Meadow will be treated using a combination of mechanical and hand treatments and will include follow-up prescribed burn activities to manage slash generated by the fuel-reduction activities. Temporary disturbances will be restored following the completion of conifer removal activities. LTBMU estimates that 9,000 green tons of biomass would be generated by this project.
- ▶ South Tahoe Fuels Treatment Project. LTBMU has approved the South Tahoe Fuels Treatment Project, which consists of forest thinning and vegetation treatments to reduce fire risk and to promote healthy and resilient forest stands. The project site includes 3,737 acres of NFS lands located in Wildland-Urban Interface and general forest areas in the southern part of the Lake Tahoe Basin. The treatment units are forested lots adjacent to urbanized areas along Pioneer Trail and U.S. 50 in the Trout/Cold Creek area of the Lake Tahoe Basin, as well as forested parcels in the Fallen Leaf Lake and Camp Richardson/Baldwin Beach areas of the Lake Tahoe Basin. It is estimated that 7,000 tons of material would be generated during these forest fuels treatments in 2020 and 2021.
- ▶ Fuels Reduction and Understory Burning Project. The State Parks Fuels Reduction and Understory Burning program is an existing, approved program of vegetation management that consists of forest thinning and prescribed understory burning on 2,012 acres of land managed by State Parks in multiple park units in the Tahoe Basin. At the Sugar Pine Point State Park collection point, there is a single chip pile that is processed from biomass accumulated from these State Parks activities, including general maintenance, hazard tree removal, and forest restoration. It is estimated that 1,500 tons of material would be generated during these forest fuels treatments from 2020 through 2022 (500 tons per year).

Collection points including landings that provide space for temporary stockpiling and processing of woody materials generated by vegetation management, as well as space for loading of haul trucks, chipping biomass, and access for other, related service vehicles. With the exception of the collection point at Sugar Pine Point State Park, vegetation brought to the collection points from the fuels treatment activities which this proposed project would collect biomass from (South Tahoe Fuels Treatment Project and the Mayala Wata Restoration Project at Meeks Meadow/Meeks Creek Meadow Ecosystem Restoration Project) would be continually sorted and processed, based on material type, such that multiple piles of material would be present in various stages of processing, including merchantable logs, slash, chips, and firewood. At the Sugar Pine Point State Park collection point, there is a single chip pile that is processed from biomass accumulated from multiple California State Parks activities, such as general maintenance, hazard tree removal, and forest restoration from several parks within the Sierra District. The proposed project would represent a continuation of biomass processing and management at collection points.

The list of projects in Table 3-10 was considered in addition to the three forest fuels treatment activities that would generate biomass that would be managed under the proposed project, in the analysis of the cumulative impacts, as described below.

Table 3-10 Cumulative Projects List

Project Name	Location	Description	Project Status
South Tahoe Fuels Treatment Project	On Forest Service parcels adjacent to and in the vicinity of South Lake Tahoe	Forest thinning activities on 3,737 acres by thinning forest stands and removing forest biomass vegetation, implementing prescribed burning, and conducting reforestation.	Project implementation has begun and is anticipated to be completed within 10 years of implementation.
Mayala Wata Restoration Project at Meeks Meadow/ Meeks Creek Meadow Ecosystem Restoration Project	Meeks Creek Meadow	Restoration of 300 acres of meadow habitat in Meeks Meadow through conifer removal and use of prescribed fire. Following conifer treatments and prescribed fire, the Washoe Tribe will implement long-term cultural management for riparian habitat enhancement and stream environment zone restoration.	The project will begin implementation in the 2020 field season and conifer thinning and removal will be conducted in one season. Long-term cultural management will occur seasonally and as determined through post-implementation monitoring results.
Carnelian Fuels Reduction and Healthy Forest Restoration Project	Near the communities of Kings Beach, Tahoe Vista, Carnelian Bay, Cedar Flat, Lake Forest, and Tahoe City	Multi-agency efforts to reduce the risk of severe wildfire, improve forest health, and provide defensible space to neighboring communities. Includes, but is not limited to, forest thinning using mechanical, hand, and prescribed burning treatments on 3,232 acres.	Project implementation has begun and is anticipated to be completed within the next 7 to 10 years.
Fuels Reduction and Understory Burning Project at other park units (D.L. Bliss State Park, Ed Z'berg-Sugar Pine Point State Park, Emerald Bay State Park, Tahoe State Recreation Area, and Ward Creek Unit)	Near the communities on the West Shore and North Shore of Lake Tahoe	State Parks to conduct fuels reduction activities on up to 2,012 acres in total.	Project implementation has begun and is anticipated to be completed within 5 years of implementation.
Incline Fuels Reduction and Healthy Forest Restoration	Northeast side of the Lake Tahoe Basin, between the Nevada /California state line and the Lake Tahoe Nevada State Park	Fuels reduction activities on 3,917 acres.	Project implementation has begun and is anticipated to be completed within the next 10 years.
West Shore WUI Hazardous Fuel Reduction	West Shore of Lake Tahoe, between Emerald Bay and Burton Creek State Park	Proposes vegetation and fuels treatments to reduce stand densities and reduce fuel loading and continuity.	Environmental review complete; implementation pending.
Lake Tahoe West Restoration Partnership	West Shore of Lake Tahoe	A strategy to guide restoration activities on 60,000 acres of Lake Tahoe's west shore. The goal is to increase the resilience of this landscape and to protect against prolonged drought, climate change, and extreme fire.	In planning stages
Meeks Bay Restoration Project	Meeks Bay	Restoration of the Meeks Creek channel, wetlands, and lagoon; improve other environmental conditions; and provide for sustainable recreation consistent with the Environmental Improvement Program.	Undergoing environmental review

Project Name	Location	Description	Project Status
North Tahoe Fire Protection District fuel reduction program	Near the communities of Kings Beach, Tahoe Vista, Carnelian Bay, Dollar Point, Tahoe City, Sunnyside, Homewood, and a portion of Tahoma	Several small fuels reduction projects completed by the North Tahoe Fire Protection District on private lands.	Ongoing
North Lake Tahoe Fire Protection District fuel reduction program	Near the communities of Crystal Bay and Incline Village on the northeast shore of Lake Tahoe	Numerous small fuels reduction projects completed by the North Lake Tahoe Fire Protection District on private lands.	Ongoing
Tahoe Program Timberland Environmental Impact Report	Private, local jurisdiction, and Conservancy lands in the WUI throughout the California side of the Lake Tahoe Basin	Long-term forest fuels reduction program that includes initial and retreatments of project areas identified in the Community Wildfire Protection Plan, as well as ongoing fuels management on private lands. Forest treatment activities would include mechanical thinning, manual/hand thinning, understory burning, pile burning, sale and transport of merchantable timber, and the transport and use of biomass for energy generation and wood pulp products.	Undergoing environmental review
Dollar Creek Forest Health and Biomass Project	Near the North Tahoe Middle School and High School	Treatment of approximately 151 acres of forest in a wildland-urban interface area on Conservancy lands in Placer County near the North Tahoe Middle School and High School This project involves transport and use of the generated biomass as fuel for electricity generation.	Environmental review complete; implementation underway.

Source: Compiled by Ascent Environmental in 2020

3.21.2 Discussion

- a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

Less than significant. Implementation of the proposed project would not 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; reduce or restrict the range of rare or endangered plants or animals (see Section 3.4 for discussion); or, eliminate important examples of the major periods of California history or prehistory (see Sections 3.5 and 3.18 for discussion).

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

Less than significant. Cumulative projects considered in combination with the Biomass Transport and Utilization Project are described in Table 3-10 and in Section 3.21.1, “Cumulative Setting,” above.

Because the proposed project would have no impact on agriculture and forest resources, cultural resources, land use and planning, mineral resources, population and housing, tribal cultural resources, police protection, schools, and utilities and service systems, it would also not contribute to a cumulative impact related to these resources. Thus, cumulative impacts related to these resource topics are not discussed further.

Resource areas where less-than-significant impacts have been identified and where a contribution to a cumulative impact could occur include: aesthetics, air quality, biology, energy, geology and soils, greenhouse gas, hazards and hazardous materials, hydrology and water quality, noise, public services, recreation, transportation, and utilities. A discussion of the cumulative impact of the proposed project on these resources areas is included below.

- ▶ **Aesthetics.** The geographic area for cumulative impacts on aesthetics encompasses the area around the west and south shores of Lake Tahoe. The topography in this area includes the shore of Lake Tahoe, gently rolling slopes, and mountainous terrain. Much of this area consists of Sierra mixed conifer forest with views of Lake Tahoe and the surrounding mountains. Fuels treatment activities in the vicinity of the proposed project, including fuels treatments that would occur concurrently with the proposed project within the footprint of the collection points, would also include the temporary use of heavy equipment that would operate within forested areas. This equipment would likely be operating concurrently, and may be visible from nearby roads or trails. However, because dense forest vegetation would provide screening for the equipment and treatment activities, and areas in the immediate vicinity of activities associated with the proposed project and cumulative projects would be closed to the public, the cumulative impact on scenic resources would be minimal. In addition, because the cumulative projects, in combination with the proposed project, involve temporary activities and would not result in substantial adverse changes to the character of the landscape, the cumulative impact on aesthetic resources from these projects would be less than significant. Because the project would be screened by existing vegetation, closed to the public, temporary, would not change the landscape character, and would support improvements to forest health, the project would not result in a considerable contribution to a temporary or permanent cumulative adverse impact on aesthetic resources.
- ▶ **Air Quality.** Collection points are in the LTAB, which is designated as nonattainment with respect to the CAAQS for ozone and PM₁₀ (CARB 2016). Collection points are in the jurisdiction of EDCAPCD. As discussed in Section 3.3, “Air Quality,” above, proposed project emissions of ozone precursors (i.e., ROG and NO_x) and PM₁₀ would not exceed of 82 lb/day, which is the mass emission threshold that EDCAQMD recommends for determining whether construction-related emissions would be cumulatively considerable. Moreover, the proposed project would improve regional air quality by reducing emissions of criteria air pollutants and ozone precursors in the Lake Tahoe Basin by eliminating the need for pile burning associated with some of the cumulative projects (i.e., forest fuels treatment activities).

Cumulative projects near the loading and hauling sites would occur during different times and in different areas, and therefore impacts related to the exposure of sensitive receptors to substantial pollutant concentrations or objectionable odors from the proposed project would not be cumulatively considerable.

- ▶ **Biological Resources.** The geographic scope for analyzing the cumulative effects on biological resources consists of the Lake Tahoe Basin. Present and probable future projects that would also affect habitat for special-status wildlife and plants, and other biological resources, in the proposed project vicinity include residential and commercial development, development of recreation facilities, resort development, and forest thinning projects, including those that would be associated with the proposed project (the South Tahoe Fuels Treatment Project, Mayala Wata Restoration Project at Meeks Meadow/Meeks Creek Meadow Ecosystem Restoration Project, and

State Parks' Fuels Reduction and Understory Burning Project). Cumulative projects that overlap with native habitats at collection points and along roadways used for the proposed project would be expected to have some level of adverse effects on these resources; however, the forest fuels treatment activities in Table 3-10 would result in long-term habitat enhancement that would benefit several wildlife species. As discussed above in Section 3.4, "Biological Resources," implementation of the proposed project would not substantially affect the distribution, breeding productivity, population viability, or the regional population of any special-status species; or cause a change in species diversity locally or regionally. Implementation of RPMs and mitigation measures committed to by the proponents of cumulative projects, as well as design features and construction controls associated with the proposed project which include that personnel implementing the project notify the project proponent representative of sighting of any roosting bird of prey, and any nesting bird, bat, or furbearer species and cease project work pending review by a biologist, would reduce potential impacts to biological resources to a less-than-significant levels. Additionally, because the Lake Tahoe Basin is recognized as environmentally sensitive, regulatory protections are in place by TRPA, El Dorado County, Placer County, U.S. Army Corps of Engineers, Lahontan Water Board, and LTBMU to require that impacts of any nearby future projects are minimized. For these reasons, and because the proposed project would involve temporary activities to chip, load, and haul biomass from landing sites and would not result in ground disturbance, the proposed project would not make a considerable contribution to a cumulative impact on biological resources.

- ▶ **Energy.** Implementation of the cumulative projects would increase fossil fuel consumption commensurate with an increase in the pace and scale of mechanical fuels treatments in the Lake Tahoe Basin. Though these treatment activities would be energy intensive, a primary objective of those projects is to reduce wildfire risk, which requires substantial and inefficient energy consumption during response (e.g., operation of fire engines and mechanical equipment). Also, the "wasteful, inefficient, and unnecessary use of energy" is interpreted to pertain specifically to grid-sourced energy demand, to which the project would not contribute.

For reasons similar to those discussed in Section 3.6, "Energy," cumulative energy impacts would be less than significant. As discussed in Section 3.6, "Energy," the proposed project's energy consumption would include limited use of fossil fuels for operating employee vehicles, a haul truck, a chipper, and other handheld or small equipment. These uses represent the use of a small quantity of fossil fuels. For cost control reasons, crews would operate efficiently, and the proposed project would be designed to transport forest material to the most cost-effective (i.e., nearest) facility for use. Moreover, as described under Section 3.6, "Energy," the proposed project would advance the goals of California Senate Bill 1383, which establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025. The law provides CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets, which it does in part through adoption of programs and expansion of facilities that would use organic waste. One such strategy involves the continued use of biomass for use in electricity generation, which the proposed project would support. The proposed project would also support improvement of air quality within LTAB, and assist in achieving TRPA's air quality thresholds by reducing air pollutant emissions generated by burning thinned vegetation from fuels treatment activities in the Tahoe Basin. Therefore, the proposed program's contribution to energy impacts from the wasteful, inefficient, and unnecessary use of energy would not be cumulatively considerable.

- ▶ **Geology and Soils.** The Lake Tahoe Basin is a seismically active area with several large, active faults. Development in seismically active areas requires specialized building techniques and awareness of fault lines to avoid placing people and property at risk. While this is a concern for development projects within the cumulative effects area, neither the proposed project or any of the cumulative projects include the construction of habitable or other permanent structures that could be affected by seismic activity. Therefore, the proposed project would have no cumulative impact relative to fault rupture, strong seismic shaking, or seismic-related ground failure.

Landslides occur when the weight of soil materials exceeds the strength of soil bonds. Loosely bonded sandy soils or soils dominated by silts and clays can be prone to landslide. In these soils intense or prolonged rainfall or rapid snowmelt can fill pore spaces in the soil matrix, adding weight while at the same time loosening soil bonds.

Landslides can also be triggered by earthquakes or slope undercutting by erosion. Additionally, areas where landslides have occurred in the past are prone to future landslides. The project sites would be located on existing landings and roads that have been graded and stabilized and would not be vulnerable to mass failure. The proposed project in conjunction with cumulative fuels treatment activities would not affect soil drainage or increase the potential for landslides in areas (collection points and roads) where proposed project activities would take place.

The Lake Tahoe Basin contains steep slopes and areas of highly erosive soils. Ground disturbance in these areas has the potential to result in adverse effects on structures and human life as a result of erosion hazard and slope stability, both of which are primarily local, site specific impacts. Cumulative projects related to forest fuels treatments would be required to comply with the erosion control conditions of TRPA and the protective provisions of the 2014 Timber Waiver. This would include a suite of RPMs tailored to the needs of each treatment site, such as limitations on harvesting activities depending on slope and proximity to water courses and sensitive habitats, erosion control practices for implementation during harvest, and restoration of disturbed sites. For these reasons and because the proposed project would not include ground disturbance activities, the proposed project would result in less-than-significant cumulative effects related to soil erosion or loss of topsoil.

As described above, the proposed project would not make a considerable contribution to a significant cumulative impact related to geology and soils.

- ▶ Greenhouse Gas Emissions. As discussed in Section 3.8, "Greenhouse Gas Emissions," the proposed project would result in a net reduction in GHG emissions. Therefore, its contribution to global climate change would not be cumulatively considerable.
- ▶ Hazards and Hazardous Materials. Although some hazardous materials releases can cover a large area and interact with other releases (e.g., atmospheric contamination, contamination of groundwater aquifers), incidents of hazardous materials contamination are more typically isolated to a small geographic area. The quantities of hazardous substances that would be associated with equipment used during proposed project activities or used in the implementation of other cumulative fuels treatment activities nearby could result in minor localized contamination. These relatively isolated areas of contamination typically do not combine in a cumulative manner with other sites of hazardous materials contamination. The proposed project and other cumulative projects would be required to comply with existing federal, state, and local hazardous materials regulations, limiting the potential for releases and contamination and requiring clean-up when releases or contamination do occur. For these reasons, the project would not result in a considerable contribution to a cumulative impact on the public or the environment from exposure to hazardous materials. Therefore, this would be a less-than-significant cumulative impact.
- ▶ Hydrology and Water Quality. Cumulative impacts to hydrology and water quality are considered in the context of the Lake Tahoe Basin watershed. Historic activities such as logging, milling, mining, and grazing within the Lake Tahoe Basin combined with runoff from urban and recreational developments have degraded the water quality of the tributaries to Lake Tahoe, resulting in an existing cumulative adverse condition. The Lake Tahoe TMDL was developed to address sediment levels in partnership with local jurisdictions. Additionally, numerous publicly and privately funded projects have been implemented to restore disturbed areas of the watershed and reduce this adverse condition. As described in Section 3.10, "Hydrology and Water Quality," minor amounts of sediment could be dislodged by activities on landings and travel on unpaved roadways; however, traffic in these areas would be very minimal, accounting for only six employee trips per day to a central parking location, and trips from a single haul truck. These activities would occur in connection and concurrently with fuels treatment activities for the South Tahoe Fuels Treatment Project, Meeks Creek Meadow Ecosystem Restoration Project, and State Parks' Fuels Reduction and Understory Burning Project. Therefore, collection points in the form of landings and access roads would experience traffic from all of these projects simultaneously. However, collection points and roads would be constructed under prior permit authorizations that include provisions for erosion control and stabilization at collection points and along roads. The proposed project would not include any ground-disturbing

activities. Therefore, the proposed project together with cumulative projects would not make a considerable contribution to a significant cumulative impact related to hydrology or water quality.

- ▶ Noise. The proposed project would result in no permanent changes to noise levels. As discussed, under Section 3.13, "Noise," the proposed project would result in some less-than-significant, short-term and temporary noise during chipping and loading operations. Proposed project activities occurring at collection points could occur simultaneously with the three fuels treatment activities associated with the proposed project (South Tahoe Fuels Treatment Project, Meeks Creek Meadow Ecosystem Restoration Project, and State Parks' Fuels Reduction and Understory Burning Project). Therefore, noise from various types of machinery could be heard at the same time. However, these activities would also be temporary and short-term in nature, and would occur during less noise-sensitive daylight hours and in accordance with applicable regulations identified in Section 3.13, "Noise;" thus, the proposed project would not make a considerable contribution to a cumulatively significant impact related to noise.
- ▶ Public Services. The geographic area for cumulative effects related to fire protection services includes potentially the entire Lake Tahoe Basin. Most cumulative projects are fuels treatment activities that are intended to reduce wildland fire risk. These cumulative projects could result in a temporary increase in wildland fire hazard and subsequent temporary increase in demand for fire protection services as a result of the use of vehicles and mechanical equipment during construction and forest thinning activities and implementation of pile burning and understory burning. However, the proposed project would involve the limited use of equipment (one chipper and one haul truck, chainsaw, and potentially one loader), which would all be outfitted with fire suppression equipment and spark arresters. With implementation of these protective measures, the proposed project would not result in a considerable contribution to a temporary or permanent cumulative impact on demand for fire protection services.
- ▶ Recreation. Recreation demand in the Lake Tahoe Basin is met with a wide variety and amount of recreational facilities and operations. Cumulative projects that would result in temporary, short-term closures of recreation opportunities include the fuels treatment activities associated with the proposed project, and other possible nearby treatments occurring during the same field seasons. Public access to these recreational areas (primarily trails) would be re-established after completion of forest thinning activities as part of the fuels treatment activities. The temporary, short-term restrictions on public access to the treatment areas would displace recreation users to other nearby trails; however, these projects are short-term and the increased demand on nearby trails or other recreation facilities would not be concentrated such that a substantial physical deterioration of these resources or subsequent adverse effects on the environment would occur. For these reasons, the proposed project when combined with other cumulative projects would result in a less-than-significant cumulative impact on recreation resources. Therefore, the project would not result in a considerable contribution to a cumulative impact on recreation resources.
- ▶ Transportation. Cumulative projects listed in Table 3-10 would generate a temporary, short-term increase in traffic on local roads near loading sites, and on regional state and interstate highways. The cumulative projects would result in more traffic than that generated by the proposed project and would be dispersed throughout the region. Additionally, the timing of traffic generated by the cumulative projects would be dispersed throughout the day. The small number of trips generated by the project in combination with the cumulative projects would not generate substantial new vehicle trips that would affect traffic on these roadways such that there would be a noticeable increase in traffic on roads associated with the proposed project, create traffic hazards, or any interference with emergency response or evacuation plans. Therefore, the proposed project would not make a considerable contribution to a significant cumulative impact related to transportation.
- ▶ Wildfire. The geographic area for cumulative impacts related to wildland fire hazards encompasses the Lake Tahoe Basin. The loading and hauling sites are located within a very high fire hazard area, as discussed in Section 3.20, "Wildfire." Past wildfires in the region have resulted in significant losses of property and substantial

damage to habitat and environmental resources. Historic wildfire suppression and other forest land management practices have allowed fuels to accumulate in many areas, contributing to the severity of wildfires when they do occur. Additionally, past development in the forested landscape has increased the risk to life and property when fires do occur and increased the potential for ignition of wildland fires through increased human presence and activity. Most cumulative projects would be fuels treatment activities that are intended to reduce wildland fire risk. These cumulative projects could result in a temporary increase in wildland fire hazard as a result of the use of vehicles and mechanical equipment during forest thinning activities, similar to the risks associated with the presence of vehicles during chipping and loading activities. However, implementation of forest fuels treatment activities typically includes implementation of a fire management plan, presence of fire suppression equipment at work sites, and spark arresters on equipment. Both the fuels treatment activities and the proposed project would reduce the long-term risk of wildland fire by removing sources of fuel for wildland fires. Therefore, the proposed project would not result in a considerable contribution to a temporary or permanent cumulative impact on wildland fire hazards. As described above, the proposed project would not make a considerable contribution to a significant cumulative impact.

As described above, the proposed project would not result in a considerable contribution to a significant cumulative impact for any of the resources discussed above. The proposed project would not have impacts that are individually limited but cumulatively considerable. This impact would be less than significant.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Less than significant. Proposed project-related environmental effects have been determined to pose a less-than-significant impact on humans. Possible impacts from fugitive dust (see Section 3.3, "Air Quality"), construction accidents, spills, and wildfire (see Section 3.9, "Hazards and Hazardous Materials"), construction-generated noise (see Section 3.12, Noise"), though temporary in nature, have the potential to result in adverse effects on humans. These potential impacts would remain at a less-than-significant level. Thus, potential adverse effects on human beings would be less than significant.

4 REFERENCES

1 Introduction

No references cited.

2 Project Description

Shaw, Daniel. Senior Environmental Scientist, California State Parks, Sierra District. February 6, 2020—email to Nanette Hansel of Ascent Environmental regarding activities implemented pursuant to the Fuels Treatment and Understory Burning MND.

3 Environmental Checklist

3.1 Aesthetics

California Department of Transportation. 2019 (August). *Designated and Eligible Scenic Highways*.

Caltrans. See California Department of Transportation.

3.2 Agriculture and Forest Resources

California Department of Conservation. 2020 (January). DLRP Important Farmland Finder. Available: <https://maps.conservation.ca.gov/DLRP/CIFF/>. Accessed January 2020.

DOC. See Department of Conservation.

Tahoe Regional Planning Agency. 2020 (January). Area Plans, Community Plans (CP), and Plan Area Statements (PAS) web tool. Available: <https://gis.trpa.org/localplans/>. Accessed January 2020.

TRPA. See Tahoe Regional Planning Agency.

3.3 Air Quality

California Air Resources Board. 2005 (April). *Air Quality and Land Use Handbook: A Community Health Perspective*. Sacramento, CA. Available: <https://ww3.arb.ca.gov/ch/handbook.pdf>. Accessed January 15, 2020.

———. 2016 (May 4). Ambient Air Quality Standards. Available: <https://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed January 15, 2020.

———. 2017 (November). *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*. Available: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed January 15, 2020.

———. 2018. Area Designations Maps / State and National. Last Updated October 24, 2019. Available: <https://ww3.arb.ca.gov/desig/adm/adm.htm>. Accessed January 15, 2020.

CARB. See California Air Resources Board.

EPA. See U.S. Environmental Protection Agency.

Islam, M., K. Rahman, M. Bahar, M. Habib, K. Ando, and N. Hattori. 2012. Pollution Attenuation by Roadside Greenbelt in and Around Urban Areas. *Urban Forestry & Urban Greening*, Vol. 11, pp. 460–464. DOI: /10.1016/j.ufug.2012.06.004

National Wildfire Coordinating Group. 2018. *NWCG Smoke Management Guide for Prescribed Fire*. Available: <https://www.nwcg.gov/publications/420-2>. Accessed January 15, 2020.

NWCG. See National Wildfire Coordinating Group

OEHHA. See Office of Environmental Health Hazard Assessment.

- Office of Environmental Health Hazard Assessment. 2015. Air Toxics Hot Spots Program - Guidance Manual for Preparation of Health Risk Assessments, Risk Assessment Guidelines. Available: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>. Accessed January 15, 2020.
- Placer County Air Pollution Control District. 2017 (June). CEQA Air Quality Handbook—Draft 2017 Update. Available: <https://www.placer.ca.gov/1801/CEQA-Handbook>. Accessed February 3, 2020.
- Roorda-Knape, M. C., N. A. Janssen, J. de Hartog, P. H. Van Vliet, H. Harssema, and B. Brunekreef. 1999. Traffic Related Air Pollution in City Districts Near Motorways. *Science of the Total Environment*. Vol. 235, pp. 339–34. DOI: 10.1016/S0048-9697(99)00217-X.
- Tong, Z., R. W. Baldauf, V. Isakov, P. Deshmukh, and K. M. Zhang. 2016. Roadside Vegetation Barrier Designs to Mitigate Near-Road Air Pollution Impacts. *Science of the Total Environment*, Vol. 541, pp. 920–927. DOI: 10.1016/j.scitotenv.2015.09.067.
- U.S. Environmental Protection Agency. 2019. Criteria Air Pollutants. Available: <https://www.epa.gov/criteria-air-pollutants>. Accessed January 15, 2020.
- Van Gosen, B.S. and Clinkenbeard J. P. 2011. Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California. U. S. Geological Survey Open-File Report 2011-1188. California Geological Survey Map Sheet 59. Available: <https://pubs.usgs.gov/of/2011/1188/>. Accessed January 28, 2020.
- Zhu, Y., W. C. Hinds, S. Kim, S. Shen, and C. Sioutas. 2002. Study of Ultrafine Particles Near a Major Highway with Heavy-Duty Diesel Traffic. *Atmospheric Environment*. Vol. 36, pp. 4323-4335. DOI: 10.1016/S1352-2310(02)00354-0

3.4 Biological Resources

- California State Parks. 2012. *Final Mitigated Negative Declaration and Response to Comments Fuels Reduction and Understory Burning, Burton Creek State Park, D.L. Bliss State Park, Ed Z'berg-Sugar Pine Point State Park, Emerald Bay State Park, Tahoe State Recreation Area, and Ward Creek Unit*.
- Lahontan Regional Water Board. See Lahontan Regional Water Quality Control Board.
- Lahontan Regional Water Quality Control Board. 2019 (January). *Initial Study/Negative Declaration Mayala Wata Restoration Project at Meeks Meadow*.
- State Parks. See California State Parks.
- U.S. Department of Agriculture, Forest Service. 2018 (April). *Decision Memo for the South Tahoe Fuels Treatment Project*.
- USDA. See U.S. Department of Agriculture Forest Service.

3.5 Cultural Resources

- California State Parks. 2005. *Burton Creek State Park General Plan*.
- . 2012. *Final Mitigated Negative Declaration and Response to Comments Fuels Reduction and Understory Burning, Burton Creek State Park, D.L. Bliss State Park, Ed Z'berg-Sugar Pine Point State Park, Emerald Bay State Park, Tahoe State Recreation Area, and Ward Creek Unit*.
- Lahontan Regional Water Board. See Lahontan Regional Water Quality Control Board.
- Lahontan Regional Water Quality Control Board. 2019 (January). *Initial Study/Negative Declaration Mayala Wata Restoration Project at Meeks Meadow*.
- Lekisch, B. 1988. *Tahoe Place Names: The Origin and History of Names in the Lake Tahoe Basin*. Great West Books, Lafayette.
- State Parks. See California State Parks.

U.S. Department of Agriculture Forest Service. 2018 (April). *Decision Memo for the South Tahoe Fuels Treatment Project*.

USDA. See U.S. Department of Agriculture Forest Service.

3.6 Energy

No references cited.

3.7 Geology and Soils

Brothers, DS, Kent GM, Driscoll NW, Smith SB, Karlin R, Dingler JA, Harding AJ, Seitz GG, Babcock JM. 2009. New Constraints on Deformation, Slip Rate, and Timing of the Most Recent Earthquake on the West Tahoe-Dollar Point Fault, Lake Tahoe Basin, California. *Bulletin of the Seismological Society of America*. 99:499-519.

California Department of Conservation. 2020. California Data Viewer. Available: <https://maps.conservation.ca.gov/cgs/DataViewer/>. Accessed February 13, 2020.

Dingler, J., Kent, G., Driscoll, N., Babcock, J., Harding, A., Seitz, G., Karlin, B., and Goldman, C., 2009, A high-resolution seismic CHIRP investigation of active normal faulting across Lake Tahoe Basin, California-Nevada: *Geological Society of America Bulletin*, v. 121, no. 7-8, p. 1089-1107

DOC. See California Department of Conservation.

Natural Resources Conservation Service. 2020. Web Soil Survey. Available: <https://websoilsurvey.sc.egov.usda.gov/>. Accessed February 2020.

NRCS. See Natural Resources Conservation Service.

3.8 Greenhouse Gas Emissions

Black, Carolyn, Yohannes Tesfaigzi, Jed A. Bassein, and Lisa A. Miller. 2017. Wildfire Smoke Exposure and Human Health: Significant Gaps in Research for a Growing Public Health Issue. *Environmental Toxicology and Pharmacology*. 55 pp. 186-195.

CalEPA et al. See California Environmental Protection Agency, California Natural Resources Agency, California Department of Food and Agriculture, California Air Resources Board, and California Strategic Growth Council.

California Air Resources Board. 2017 (November). *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*. Available: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed January 30, 2020.

———. 2018. *California Greenhouse Gas Emissions for 2000 to 2016: Trends of Emissions and Other Indicators*. Available: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2016/ghg_inventory_trends_00-16.pdf. Accessed January 27, 2020.

———. 2019. California Greenhouse Gas Emission Inventory. 2019 Edition. Available: <https://ww2.arb.ca.gov/ghg-inventory-data>. Accessed January 27, 2020.

California Energy Commission. 2019. California Energy Efficiency Action Plan. Available: [https://ww2.energy.ca.gov/business_meetings/2019_packets/2019-12-11/Item_06_2019%20California%20Energy%20Efficiency%20Action%20Plan%20\(19-IEPR-06\).pdf](https://ww2.energy.ca.gov/business_meetings/2019_packets/2019-12-11/Item_06_2019%20California%20Energy%20Efficiency%20Action%20Plan%20(19-IEPR-06).pdf). Accessed January 29, 2020.

California Environmental Protection Agency, California Natural Resources Agency, California Department of Food and Agriculture, California Air Resources Board, and California Strategic Growth Council. 2019 (January). *California 2030 Natural and Working Lands Climate Change Implementation Plan*. Available: <https://ww3.arb.ca.gov/cc/natandworkinglands/draft-nwl-ip-1.3.19.pdf>. Accessed January 30, 2020.

CARB. See California Air Resources Board.

CEC. See California Energy Commission.

El Dorado County. 2004. General Plan. First adopted on July 19, 2004. Last Amended on August 6, 2019. Available: https://www.edcgov.us/Government/planning/Pages/adopted_general_plan.aspx. Accessed January 15, 2020.

———. 2008. *Environmental Vision for El Dorado County*, Resolution No. 29-2008. Available: https://www.edcgov.us/Government/AirQualityManagement/documents/Resolution_No_29-2008.pdf. Accessed January 28, 2020.

Forest Climate Action Team. 2018 (May). California Forest Carbon Plan: Managing Our Forest Landscapes in a Changing Climate. Available: <http://resources.ca.gov/wp-content/uploads/2018/05/California-Forest-Carbon-Plan-Final-Draft-for-Public-Release-May-2018.pdf>. Accessed January 30, 2020.

Intergovernmental Panel on Climate Change. 2007. *Climate Change 2007—The Physical Science Basis*. Working Group I Contribution to the Fourth Assessment Report. Accessed May 2, 2019. Available: <https://www.ipcc.ch/report/ar4/wg1/>. Accessed February 6, 2020.

———. 2013. Chapter 6, Carbon and Other Biogeochemical Cycles. Pages 465–570 in *Climate Change 2013: The Physical Science Basis*. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Available: http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf. Accessed January 29, 2020.

———. 2014. *Climate Change 2014 Synthesis Report: Summary for Policymakers*. Available: https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf. Accessed January 29, 2020.

IPCC. See Intergovernmental Panel on Climate Change.

McKibben, Bill. 2018. How Extreme Weather is Shrinking the Planet. *The New Yorkers*. Issued November 26, 2018. Available: <https://www.newyorker.com/magazine/2018/11/26/how-extreme-weather-is-shrinking-the-planet>. Accessed January 29, 2020.

United Nations. 2015 (December 13). *Historic Paris Agreement on Climate Change: 195 Nations Set Path to Keep Temperature Rise Well Below 2 Degrees Celsius*. Available: <https://unfccc.int/news/finale-cop21>. Accessed January 28, 2020.

3.9 Hazards and Hazardous Materials

City of South Lake Tahoe. 2020. City of South Lake Tahoe Community Mass Evacuation Map.

El Dorado County. 2004. *El Dorado County General Plan: Public Health Safety, and Noise Element*.

Placer County. 2015. *Placer Operational Area East Side Emergency Evacuation Plan*.

3.10 Hydrology and Water Quality

No references cited.

3.11 Land Use and Planning

California State Parks. 2005. *Burton Creek State Park General Plan*.

3.12 Mineral Resources

California Department of Conservation. 1995. *Mineral Land Classification of Placer County, California*. Division of Mines and Geology Open File Report 95-10.

———. 2001. *Mineral Land Classification of El Dorado County, California*. California Geological Survey Open File Report 2000-03.

DOC. See California Department of Conservation.

Tahoe Regional Planning Agency. 2012. *Regional Plan*. Adopted by the TRPA Governing Board Dec 12, 2012. Effective Feb 9, 2013. Available: <https://www.trpa.org/regional-plan/>. Accessed January 2020.

TRPA. See Tahoe Regional Planning Agency.

3.13 Noise

Tahoe Regional Planning Agency. 2012. *Regional Plan*. Adopted by the TRPA Governing Board Dec 12, 2012. Effective Feb 9, 2013. Available: <https://www.trpa.org/regional-plan/>. Accessed January 2020.

———. 2016 (December). *2015 Threshold Evaluation Report: Chapter 10 Noise*. Available: <http://www.trpa.org/regional-plan/threshold-evaluation/>. Accessed January 2020.

TRPA. See Tahoe Regional Planning Agency.

3.14 Population and Housing

No references cited.

3.15 Public Services

U.S. Department of Agriculture Forest Service. 2014 (August). *Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy*. Lake Tahoe Basin Management Unit. South Lake Tahoe, CA.

USDA. See U.S. Department of Agriculture Forest Service.

3.16 Recreation

Tahoe Regional Planning Agency. 2017 (April). *Linking Tahoe: Regional Transportation Plan and Sustainable Communities Strategy, Horizon Year 2017-2040*.

TRPA. See Tahoe Regional Planning Agency.

3.17 Transportation

Governor's Office of Planning and Research. 2018 (December). *Technical Advisory on Evaluating Transportation Impacts in CEQA*. Available: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed February 13, 2020.

OPR. See Governor's Office of Planning and Research.

Tahoe Regional Planning Agency. 2017 (April). *Linking Tahoe: Regional Transportation Plan and Sustainable Communities Strategy, Horizon Year 2017-2040*.

TRPA. See Tahoe Regional Planning Agency.

3.18 Tribal Cultural Resources

California State Parks. 2012. *Final Mitigated Negative Declaration and Response to Comments Fuels Reduction and Understory Burning, Burton Creek State Park, D.L. Bliss State Park, Ed Z'berg-Sugar Pine Point State Park, Emerald Bay State Park, Tahoe State Recreation Area, and Ward Creek Unit*.

Lahontan Regional Water Board. See Lahontan Regional Water Quality Control Board.

Lahontan Regional Water Quality Control Board. 2019 (January). *Initial Study/Negative Declaration Mayala Wata Restoration Project at Meeks Meadow*.

State Parks. See California State Parks.

U.S. Department of Agriculture, Forest Service. 2018 (April). *Decision Memo for the South Tahoe Fuels Treatment Project*.

USDA. See U.S. Department of Agriculture Forest Service.

3.19 Utilities and Service Systems

No references cited.

3.20 Wildfire

Abatzoglou, J.T. and A.P. Williams. 2016 (October 16). Impact of anthropogenic climate change on wildfire across western U.S. forests. *Proceedings of the National Academy of Sciences* 113(42):11770-11775.

Balch, J. K., B. A. Bradley, J. T. Abatzoglou, R. C. Nagy, E. J. Fusco, and A. L. Mahood. 2017 (March 14). Human-started wildfires expand the fire niche across the United States. *Proceedings of the National Academy of Sciences* 114(11):2946-2951.

DOI and USDA. See U.S. Department of the Interior and U.S. Department of Agriculture.

Loudermilk, E. L., Stanton, A., Scheller, R. M., Dilts, T. E., Weisberg, P. J., Skinner, C., & Yang, J. 2014. Effectiveness of fuel treatments for mitigating wildfire risk and sequestering forest carbon: A case study in the *Lake Tahoe Basin*. *Forest Ecology and Management*, 323, 114–125.

Radeloff, V.C. et al. 2018. Rapid Growth of the US Wildland-Urban Interface Raises Wildfire Risk. *Proceedings of the National Academy of Sciences*. 115(13): 3314-3319.

U.S. Department of the Interior and U.S. Department of Agriculture. 2014. The National Strategy: The Final Phase of the Development of the National Cohesive Wildland Fire Management Strategy.

3.21 Cumulative Impacts and Mandatory Findings of Significance

California Air Resources Board. 2016 (May 4). Ambient Air Quality Standards. Available: <https://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed January 15, 2020.

5 REPORT PREPARERS

Ascent Environmental

Curtis E. Alling, AICPProject Director
Tiffany Lunday.....Project Manager, Primary Section Author
Nanette Hansel.....Senior Reviewer
Austin Kerr.....Air Quality and Greenhouse Gas Emissions Task Leader
Chris Lovett.....Air Quality and Greenhouse Gas Emissions Analyst
Kelley Kelso, CPESC.....Geology and Soils, Hydrology and Water Quality
Jessica MitchellAesthetics, Biological Resources, Cultural Resources
Zachary Miller.....Transportation
Kristi BlackRecreation, Wildfire
Jessica Babcock.....Population and Housing, Utilities
Michele Mattei.....Publishing and document production
Phi NgoGIS analysis and mapping
Corey AllingGraphics

California Tahoe Conservancy

Joseph Harvey.....Forest Operations Specialist
Sara Cutuli.....Staff Attorney

California Department of General Services

Stephanie Coleman.....Senior Environmental Planner

This page intentionally left blank.