January 29, 2019

To Interested Parties

Notice of Intent to Adopt a Negative Declaration and Opportunity to Provide Comments on the Proposed Mayala Wata Restoration Project at Meeks Meadow, El Dorado County, State Clearinghouse 2018112063

The Lahontan Regional Water Quality Control Board (Lahontan Water Board) is the lead agency pursuant to the California Environmental Quality Act (CEQA) for the Mayala Wata Restoration Project at Meeks Meadow (Project). The Washoe Tribe of Nevada and California (Washoe Tribe) and the U.S. Forest Service – Lake Tahoe Basin Management Unit (LTBMU) are the Project proponents. The Lahontan Water Board has prepared a Negative Declaration describing the Project and potential environmental impacts. A copy of the Negative Declaration can be downloaded at: www.waterboards.ca.gov/lahontan. To request a compact disc or paper copy of the Negative Declaration please call the Lahontan Water Board's South Lake Tahoe office at (530) 542-5400.

Project Location

The Project area is located on the west side of US Highway 89 in Meeks Bay, El Dorado County, California. Meeks Meadow is located within the Meeks Management Area on the western shore of Lake Tahoe. To access the Project area, while traveling from the north, take a right turn from US Highway 89 onto USFS Road 14N42, which travels along the northern edge of Meeks Meadow, or take a right turn onto USFS Road 14N44, which travels along the southern edge of Meeks Meadow. See the attached Figure 1 for the Project location map.

Project Description

The Washoe Tribe and the LTBMU propose to restore 300 acres of meadow habitat in Meeks Meadow near Lake Tahoe, California through conifer removal and use of prescribed fire. Following conifer treatments and prescribed fire, the Tribe will implement long-term cultural management for riparian habitat enhancement and stream environment zone restoration, including the propagation and planting of culturally-significant meadow and riparian plants in key meadow locations. This Project will reduce forest fuels by removing encroaching conifers and reintroducing periodic burning as an ongoing meadow management tool. The meadow will be treated using a

combination of mechanical and hand treatments and will include the construction of temporary roads and landings. These temporary disturbances will be restored following the completion of conifer removal activities.

The Negative Declaration contains a detailed Project description that includes resource protection measures identified during the National Environmental Policy Act (NEPA) process, Lahontan Water Board permit requirements, and conditions required pursuant to permitting by the Tahoe Regional Planning Agency (TRPA). It is anticipated that this project will be enrolled in the following Lahontan Water Board permit: Conditional Waiver of Waste Discharge Requirements for Waste Discharge Resulting from Timber Harvest and Vegetation Management Activities "2014 Timber Waiver" (Board Order R6T-2014-0030).

Project Background

Meeks Meadow is owned by the U.S. Federal Government and is managed by the LTBMU. The Washoe Tribe has adequate site control and legal management authority to implement their portions of the project through a series of Memorandums of Understanding (MOUs) and Cooperative Agreements. The Cooperative Agreements gives the Washoe Tribe authority to: inventory environmental assets; develop restoration and enhancement plans; implement and monitor management actions; and apply for funding for planning, restoration and management activities in the Meeks Meadow.

Prior Environmental Review

The LTBMU previously conducted environmental review for this Project pursuant to NEPA. The LTBMU developed a Proposed Action and conducted scoping from June 22, 2012 to July 23, 2012. This scoping included posting in local newspapers, mailing to interested parties, and listing the project on the LTBMU website. On May 20, 2013 the LTBMU Forest Supervisor signed a *Decision Memo for Implementation of the Meeks Creek Meadow Ecosystem Restoration Project, El Dorado County, California* determining the project can be categorically excluded from documentation in an environmental impact statement or environmental assessment. Additional information on the NEPA process for this Project can be found at: https://www.fs.usda.gov/detail/ltbmu/landmanagement/projects/?cid=fsm9_046743

The Project is identified on the TRPA's Environmental Improvement Program (EIP) 5-year list as project number 01.02.02.2018. The Project's EIP Focus Area is "Watersheds, Habitat, Water Quality" that addresses TRPA Environmental Threshold Categories for Vegetation Preservation and Water Quality. As EIP administrator and permitting agency, TRPA approval of the Project requires preparation of a TRPA Initial Environmental Checklist (IEC) and submittal and approval of an EIP Project application. The Project must also comply with the TRPA Regional Plan and the Code of Ordinances.

How to Comment

This request for comments is intended to provide interested individuals, organizations, and agencies an opportunity to comment on concerns about the environmental effects of

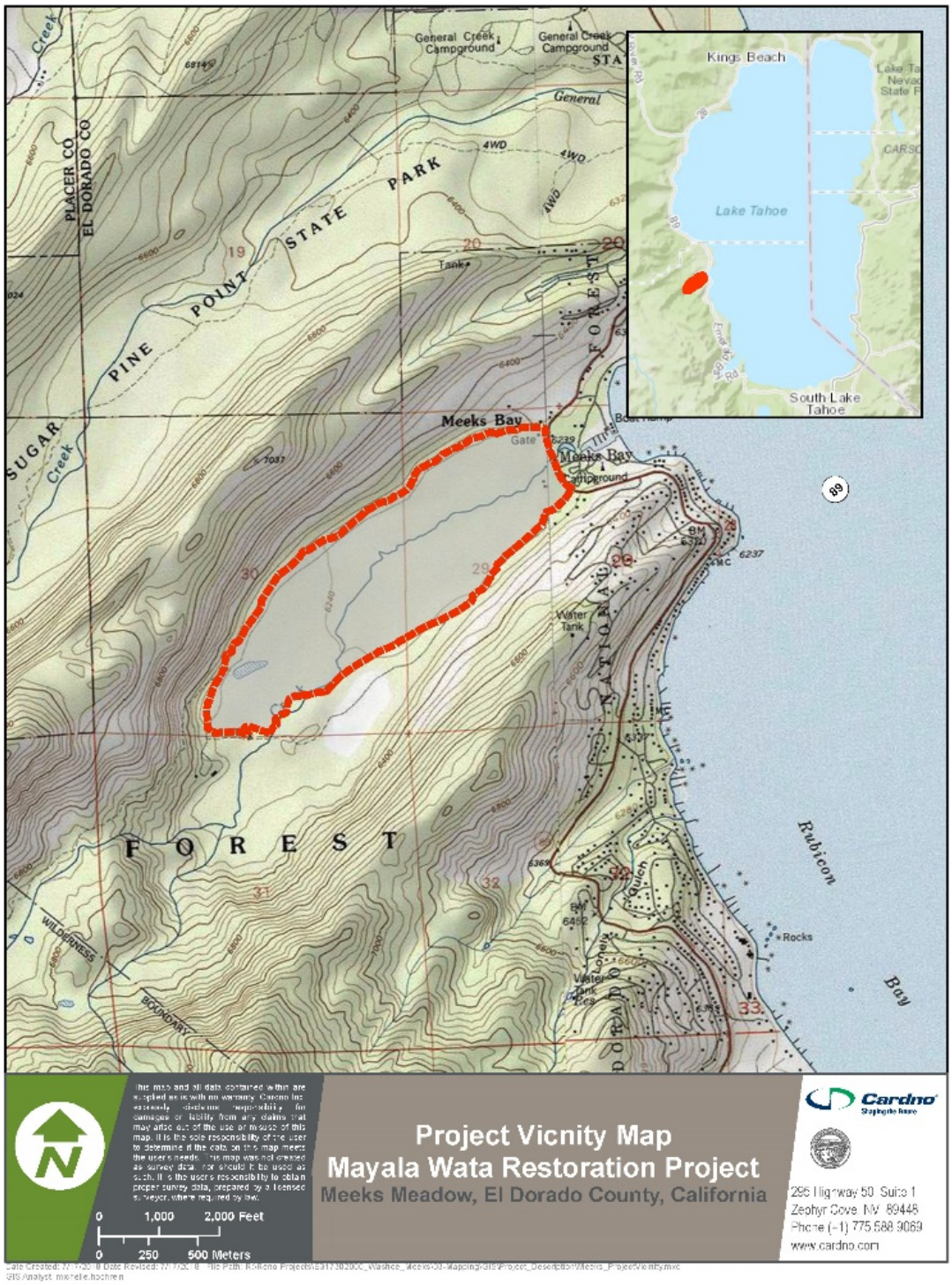
the Project. Please submit comments to the Lahontan Water Board by **March 1, 2019.** Comments may be submitted via email to Lahontan@waterboards.ca.gov with the subject line of NPS Unit - Mayala Wata Restoration Project; or via paper copy to the Lahontan Water Board, ATTN: NPS Unit, 2501 Lake Tahoe Blvd, South Lake Tahoe, CA 96150**.**

For questions or additional information please contact Laurie Scribe at (530) 542-5465 or laurie.scribe@waterboards.ca.gov.

Enclosure: Figure 1 Mayala Wata Project Vicinity Map

LS/ma/T: Mayala Wata.CEQA.NOI.ISND
File Under: ECM / Mayala Wata SCH 2018112063

Figure 1 Project Location Map - Mayala Wata Restoration Project at Meeks Meadow



Public Draft

Initial Study/Negative Declaration

Mayala Wata Restoration Project at Meeks Meadow

January 2019

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Shaping the Future

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Acronyms

2014 Timber Waiver	Conditional Waiver of Waste Discharge Requirements for Waste Discharge Resulting from Timber Harvest and Vegetation Management Activities ("2014 Timber Waiver"), Board Order No. R6T-2014-0030
AB 32	California Global Warming Solutions Act of 2006
APCD	Air Pollution Control District
APE	Area of Potential Effects
AQMD	Air Quality Management District
ATM	Forest Service Trail Access and Travel Management Plan
ATV	All-Terrain Vehicle
BA	Biological Assessment
BAGEPA	Bald and Golden Eagle Protection Act
BE	Biological Evaluation
BMP	Best Management Practice
Board	California Board for Geologists and Geophysicists
CAA	Federal Clean Air Act of 1970
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEP	Community Enhancement Program
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH_4	Methane
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
County	El Dorado County
CRHR	California Register of Historical Resources
CTL	Cut to Length
CWA	Federal Clean Water Act of 1972

dB/dBA	Decibel/A-weighted decibel
dbh	Diameter at Breast Height
DPM	Diesel Particulate Matter
EA	Environmental Assessment
EIP	TRPA Environmental Improvement Program
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FONSE	Finding of No Significant Effect
Forest Plan	LTBMU Land Management Plan
Forest Service	U.S. Department of Agriculture Forest Service
FPR	Forest Practice Rules
GHGs	Greenhouse Gases
HU	Hydrologic Unit
IEC	Initial Environmental Checklist
IPaC	Information for Planning and Conservation
IS	Initial Study
Lahontan Basin Plan	Water Quality Control Plan for the Lahontan Region
Lahontan Water Board	Regional Water Quality Control Board – Lahontan Region
lb/day	Pounds per Day
LCD	Land Capability District
LCT	Lahontan Cutthroat Trout
LTBMU	USDA Forest Service Lake Tahoe Basin Management Unit
MBTA	Migratory Bird Treaty Act
mg/L	Milligrams per Liter
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	Negative Declaration
NEPA	National Environmental Policy Act

NHPA	National Historic Preservation Act
NO_2	Nitrogen Dioxide
NOx	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
O_3	Ozone
PAC	Protected Activity Center
PAS	Plan Area Statement
PM_{10}	Particulate Matter Less than 10 Microns in Diameter
$PM_{2.5}$	Particulate Matter Less than 2.5 Microns in Diameter
PPB	Parts per Billion
PPM	Parts per Million
PRC	Public Resource Code
Programmatic Agreement	First Amended Programmatic Agreement among the USDA Forest Service, Pacific Southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Act for Management of Historic Properties by the National Forests of the Pacific Southwest Region
Project	Mayala Wata Restoration Project at Meeks Meadow
psi	Pounds per Square Inch
ROG	Reactive Organic Gases
RPF	Registered Professional Forester
RPM	Resource Protection Measure
RPU	TRPA 2012 Regional Plan Update
RTP	Regional Transportation Plan
SEZ	Stream Environment Zone
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SNFPA	Sierra Nevada Forest Plan Amendment
SNYLF	Sierra Nevada Yellow-Legged Frog
SO_2	Sulfur Dioxide
SR	State Route
State Water Board	California State Water Resources Control Board
TAC	Toxic Air Contaminants
TEK	Traditional Ecological Knowledge
THPO	Tribal Historic Preservation Officer

TMDL	Total Maximum Daily Load
TPZ	Timberland Production Zone
TRPA	Tahoe Regional Planning Agency
TRPA Code	TRPA Code of Ordinances
UCMP	University of California Museum of Paleontology
USACE	United States Army Corps of Engineers
U.S.C.	U.S. Code
USDA	U.S. Department of Agriculture
USFWS	United States Fish and Wildlife Service
Washoe Tribe	Washoe Tribe of Nevada and California
Watershed Specialist	LTBMU Hydrologist or Hydrologic Technician
WBBZ	Waterbody Buffer Zone
WCRAC	Washoe Cultural Resources Advisory Council
WEPD	Washoe Environmental Protection Department
WQO	Water Quality Objective
$\mu g/m^3$	Microgram per Cubic Meter

NEGATIVE DECLARATION SCH No. 2018112063

Pursuant to Title 14 California Code of Regulations (CCR), Chapter 3 Guidelines for Implementation of the California Environmental Quality Act (CEQA) and based on the information contained in the attached Initial Study (IS), the determination is made that the Project would not have a significant adverse effect on the environment.

Project Name: Mayala Wata Restoration Project at Meeks Meadow

Project Location: Meeks Bay, El Dorado County, California

Project Description: The Washoe Tribe of Nevada and California (Washoe Tribe), jointly with the United States Department of Agriculture (USDA) Forest Service Lake Tahoe Basin Management Unit (LTBMU), proposes to restore 300 acres of meadow habitat in Meeks Meadow in Lake Tahoe, California, through removal of encroaching conifers, thinning conifers in select areas, prescribed broadcast burning, and planting of culturally significant native riparian and meadow species. The Mayala Wata Restoration Project at Meeks Meadow (Project) will reduce forest fuels by removing encroaching conifers and reintroducing periodic burning as an ongoing meadow management tool. The primary purpose of this Project is to restore the meadow using pre-European conditions for reference while managing for resiliency to prepare for uncertain future conditions. The intent of the Project is to restore the ecological and hydrological function of the Meeks Meadow complex, the Project area, which will in turn prepare these systems for natural disturbances in the future. Pre-European conditions are considered those prior to Comstock logging, livestock grazing, mining, and fire suppression.

The Project area will be treated using a combination of mechanical and hand treatments. Because seasonal high groundwater levels in the meadow are expected to rise following conifer removal, which would make burning more difficult, prescribed fire will be applied as soon as possible following conifer removal actions. Prescribed fire in the form of broadcast burning will be introduced into the treated areas to enhance and encourage native meadow and riparian vegetation. Riparian habitat enhancement, including the propagation and planting of culturally significant meadow and riparian plants in key meadow locations, will follow conifer removal and thinning and prescribed fire.

The Project will allow for the Washoe Tribe to actively participate and manage aboriginal lands in a historic and traditional manner conjunctively with the Forest Service. The partnership between the Forest Service and the Washoe Tribe has tasked the tribe with preparing and implementing a Cultural Management Plan for the long-term implementation of Traditional Ecological Knowledge (TEK) and restoration of hydrological, biological, and ecological meadow processes and functions. The Forest Service has provided the technical support, analysis, and National Environmental Policy Act (NEPA) clearance to implement this restoration project. The Project has applied for enrollment in the Conditional Waiver of Waste Discharge Requirements for Waste Discharge Resulting from Timber Harvest and Vegetation Management Activities ("2014 Timber Waiver"), Board Order No. R6T-2014-0030 as a Category 6 project. Long-term cultural management of the meadow by the Washoe Tribe meets the eligibility criteria and conditions of Category 2. The Project is Environmental Improvement Program (EIP) Project No. 01.02.02.2018 for Watersheds, Habitat, and Water Quality, addressing Tahoe Regional Planning Agency (TRPA) Environmental Threshold Categories for Vegetation Preservation and Water Quality and was approved for implementation on December 10, 2018.

Findings: This IS/Negative Declaration (ND) follows the standard content required for environmental documents under CEQA. This IS/ND is a full disclosure document, describing the Project and its environmental effects in sufficient detail to aid decision-making.

Based on the IS analyses and level of significant conclusions, the determination can be made that the proposed Project will not result in a significant impact on the environment. An Environmental Impact Report (EIR) was determined to be unnecessary, as there are no potentially significant environmental effects associated with approval of the Project that could not be avoided, reduced, minimized, or otherwise mitigated by the design to a less-than-significant level. An ND has been prepared in accordance with CEQA statutes.

Based on the IS, this Project incorporates the standard construction measures, best management practices, compliance measures, and resource protection measures such that potential Project impacts are reduced to levels of less than significant. This conclusion is supported by the following findings:

The Project would have less-than-significant impacts on aesthetics, agriculture and forest resources, air quality, biological resources, geology and soils, tribal and cultural resources, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, recreation uses, land use and planning, minerals and energy, population and housing, public services, traffic and circulation, and utilities and service systems.

CEQA Environmental Checklist:

Project Title:	**Mayala Wata Restoration Project at Meeks Meadow**
Lead agency name and address:	Lahontan Regional Water Quality Control Board 2501 Lake Tahoe Boulevard South Lake Tahoe, CA 96150
Contact person and phone number:	Laurie Scribe, Environmental Scientist 530.542.5465
Project location:	Meeks Bay, El Dorado County, California
Project sponsor's name and address:	USDA Forest Service Lake Tahoe Basin Management Unit (LTBMU) and the Washoe Tribe of NV and CA
General plan description:	Conservation
Zoning:	Open Space
Description of Project: (Describe the whole action involved, including but not limited to later phases of the Project, and any secondary, support, or off-site features necessary for its implementation.)	See Section 3.0, Project Description
Surrounding land uses and setting; briefly describe the Project's surroundings:	The surrounding area is predominantly forested and includes Forest Service property, access to Desolation Wilderness, State Route 89 right-of-way, Meeks Bay Marina and Campground, developed residential areas, and Sugar Pine Point State Park
Other public agencies whose approval is required (e.g. permits, financial approval, or participation agreements):	• USDA Forest Service (2013 Decision Memo/NEPA Categorical Exemption and Stewardship Agreement with the Washoe Tribe of NV and CA) • Lahontan Water Board (Category 6 2014 Timber Waiver Enrollment and Category 2 2014 Timber Wavier Enrollment)

	• TRPA (EIP Project Permit EIPC2018-0012) • El Dorado AQMD Burn Permit

Determination: On the basis of this initial evaluation,

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

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1 EXECUTIVE SUMMARY

1.1 Project Summary

The purpose of this Initial Study/Negative Declaration (IS/ND) is to evaluate the potential environmental impacts of the Mayala Wata Restoration Project at Meeks Meadow (Project) in Meeks Bay, El Dorado County, California. In compliance with the California Environmental Quality Act (CEQA) Guidelines Section 15063(c), this IS provides an analysis of the proposed Project's potential to impact the physical and human environment and informs the lead agency on whether an ND, Mitigated Negative Declaration (MND), or Environmental Impact Report (EIR) should be prepared.

The Washoe Tribe of Nevada and California (Washoe Tribe), jointly with the United States Department of Agriculture (USDA) Forest Service Lake Tahoe Basin Management Unit (LTBMU), proposes to restore 300 acres of meadow habitat in Meeks Meadow in Lake Tahoe, California, through removal of encroaching conifers, thinning conifers in select areas, prescribed broadcast burning, and planting of culturally significant native riparian and meadow species. The Project will reduce forest fuels by removing encroaching conifers and reintroducing periodic burning as an ongoing meadow management tool. The primary purpose of this Project is to restore the meadow using pre-European conditions for reference while managing for resiliency to prepare for uncertain future conditions. The intent of the Project is to restore the ecological and hydrological function of the Meeks Meadow complex, the Project area, which will in turn prepare these systems for natural disturbances in the future. Pre-European conditions are considered those prior to Comstock logging, livestock grazing, mining, and fire suppression.

The Project area will be treated using a combination of mechanical and hand treatments. Because seasonal high groundwater levels in the meadow are expected to rise following extensive conifer removal, which would make burning more difficult, prescribed fire will be applied as soon as possible following conifer removal actions. Prescribed fire in the form of broadcast burning will be introduced into the treated areas to enhance and encourage native meadow and riparian vegetation. Riparian habitat enhancement, including the propagation and planting of culturally significant meadow and riparian plants in key meadow locations, will follow conifer removal and thinning and prescribed fire. The Project will allow for the Washoe Tribe to actively participate and manage aboriginal lands in a historic and traditional manner conjunctively with the Forest Service. The partnership between the Forest Service and the Washoe Tribe tasked the Washoe Tribe to prepare and implement a Cultural Management Plan for the long-term implementation of Traditional Ecological Knowledge (TEK) and restoration of hydrological, biological, and ecological meadow processes and functions.

The Regional Water Quality Control Board – Lahontan Region (Lahontan Water Board) is the lead agency under CEQA for the Project-level environmental documentation and review of the Project for eligibility and enrollment under a Conditional Waiver of Waste Discharge Requirements for Waste Discharge Resulting from Timber Harvest and Vegetation Management Activities ("2014 Timber Waiver"), Board Order No. R6T-2014-0030. The Project has been planned and designed to comply with the 2014 Timber Waiver requirements. The Project has applied for enrollment in the 2014 Timber Waiver and will be implemented in accordance with the criteria, general conditions, and applicable category-specific conditions. This project-level CEQA document is being prepared so that the Project applicant can be eligible for State of California grant funding.

The LTBMU is the lead agency for the Project under the National Environmental Policy Act (NEPA). The Forest Supervisor issued a Decision Memorandum for the proposed actions in 2013, concluding that this decision may be categorically excluded from documentation in an Environmental Impact Statement or

Environmental Assessment because the Project falls under a category identified in *Forest Service Handbook 1909.15* Chapter 32.1 – Categories of Actions for Which a Project or Case File and Decision Memo are Required (i.e., Category 6 timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than 1 mile of low standard road construction). The Project-specific resource protection measures (RPMs) that are detailed in the 2013 Decision Memorandum are carried forward as part of the proposed Project that is analyzed in this IS (LTBMU 2013).

The Tahoe Regional Planning Agency (TRPA) is the administering agency for the Environmental Improvement Program (EIP) in the Lake Tahoe Basin. The Project is EIP No. 01.02.02.2018 on the EIP 5-year list for Watersheds, Habitat, and Water Quality, which addresses TRPA Environmental Threshold Categories for Vegetation Preservation and Water Quality. As EIP administrator and permitting agency, TRPA approval of the Project required preparation of a TRPA Initial Environmental Checklist (IEC) and submittal and approval of an EIP project application. The Project must also comply with the TRPA Regional Plan and the Code of Ordinances. TRPA staff, through the current memorandum of understanding (MOU) between the TRPA and the Forest Service, have reviewed and approved the Project. The Project will be implemented in accordance with the Project approval that was issued on December 10, 2018.

1.2 California Environmental Quality Act

This IS/ND has been prepared pursuant to CEQA, Public Resources Code (PRC) Section 21000-21177, and the CEQA Guidelines (Title 14, California Code of Regulations [CCR], Division 6, Chapter 3, Sections 15000-15387). The Lahontan Water Board is the lead agency for this Project. CEQA-defined levels of impact significance are as follows:

Impact Severity	Definition
No Impact	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).
Less than Significant Impact	"Less than Significant Impact" applies where the Project's impact creates no significant impacts based on the criterion or criteria that sets the level of impact to a resource and require no mitigation to avoid or reduce impacts.
Less than Significant Impact after Mitigation	"Less than Significant Impact after Mitigation" 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.
Significant Impact	"Significant Impact" is appropriate if there is substantial evidence that an effect is potentially significant, as based on the criterion or criteria that sets the level of impact to a resource. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

The decision to prepare an ND or MND is outlined in CCR Section 15070:

A public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:

(a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or

(b) The initial study identifies potentially significant effects, but:

> *(1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and*
>
> *(2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.*

Subsection (a) reflects the concept of the "Negative Declaration" as defined in PRC Section 21064.5. Subsection (b) reflects the concept of the "Mitigated Negative Declaration" as defined in PRC Section 21064.5. An MND is not intended to be a new kind of document. It is merely an ND prepared in a slightly different situation. The CEQA Guidelines continue to give lead agencies the option of allowing applicants to modify their projects so that the lead agency can make a finding that the project would not have a significant effect on the environment.

1.3 Environmental Factors Potentially Affected

Environmental factors checked below would indicate that at least one impact that is a "Potentially Significant Impact" as indicated by the checklist analyses presented in Sections 6 through 24. Analyses identified no potentially significant impacts that would result from project implementation and support conclusions of either no impact or less than significant impact towards the following resources:

☐	Aesthetics	☐	Agriculture and Forestry	☐	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Geology/Soils
☐	Greenhouse Gas Emissions	☐	Hazards and Hazardous Materials	☐	Hydrology/Water Quality
☐	Land Use/Planning	☐	Mineral Resources	☐	Noise
☐	Population/Housing	☐	Public Services	☐	Recreation
☐	Transportation/Traffic	☐	Utilities/Service Systems	☐	Mandatory Findings of Significance

1.4 Project Contact Information

Lahontan Water Board
Laurie Scribe, Environmental Scientist
Address: 2501 Lake Tahoe Boulevard
South Lake Tahoe CA 96150
Phone: 530.542.5465
Email: laurie.scribe@waterboards.ca.gov

2.0 INTRODUCTION AND BACKGROUND

2.1 Introduction

This IS has been prepared to address the potential environmental effects of the Mayala Wata Restoration Project at Meeks Meadow (Project). An IS is a preliminary environmental analysis that is used by the lead agency as a basis for determining whether an EIR, a MND, or a ND is required for a project under CEQA guidelines. The IS contains a Project description, description of environmental setting, identification of environmental effects by checklist or other similar form, explanation of environmental effects, discussion of mitigation for significant environmental effects, evaluation of the Project's consistency with existing and applicable land use controls, and the names of persons who prepared the study.

This IS/ND has been prepared pursuant to CEQA, California Public Resource Code (PRC) §21000 et seq. The CEQA lead agency for this Project is the Lahontan Water Board. This Project-level IS/ND has been prepared specifically to fulfill CEQA-specific requirements for application for and acquisition of State of California grant funding (e.g., Proposition 1 and Proposition 68).

This Project is currently poised for implementation through the following Project approvals and environmental documentation:

- CEQA – Enrollment under Board Order No. R6T-2014-0030;
- TRPA– TRPA EIP Project approval and finding of no significant effect (FONSE); and
- NEPA – 2013 Decision Memo for Implementation of the Meeks Creek Meadow Ecosystem Restoration Project, El Dorado County, California.

2.2 Project Summary

The Washoe Tribe, jointly with the LTBMU, propose to restore 300 acres of meadow at Meeks Meadow in Lake Tahoe, California, through removal of encroaching conifers and prescribed fire. This Project will reduce fuels and reintroduce periodic cultural burning as a long-term meadow management tool. The meadow will be treated using a combination of mechanical and hand treatments. Cultural broadcast burning will be introduced following conifer removal to enhance and encourage native meadow vegetation. Vegetation improvements, including propagation, planting, and seeding of culturally significant vegetation, and other cultural management actions will follow initial conifer removal and broadcast burning.

The Project empowers the Washoe Tribe to reintroduce historic cultural land management practices back into the Lake Tahoe Basin. This innovative project will serve as a model for future conservation efforts utilizing Traditional Ecological Knowledge (TEK).

2.3 Project Background

Meeks Meadow is owned by the U.S. federal government and is managed by the LTBMU. The Washoe Tribe does not own the Project area; however, the tribe has adequate site control and legal management authority to support the Project through a series of memoranda of understanding (MOUs) and Cooperative Agreements. An MOU signed between the Washoe Tribe and LTBMU in 1997 establishes a Government-to-Government relationship, protocols, and responsibilities, recognizing common land management and conservation goals. A project agreement was also signed in 1997 that described the intent of the LTBMU to issue a 30-year special use permit to the tribe to manage Meeks Meadow for cultural and traditional purposes. The Meeks Bay Resort and Marina Special Use Permit was applied for and issued in late 1997. The intent of this project agreement was to re-establish a Washoe Tribal presence at Lake Tahoe. On

February 26, 1999, an MOU between the two parties was signed, recognizing the need for the sustainable management of wetlands, riparian areas, and native vegetation at Meeks Meadow. Renewal of agreements made under this MOU were set to expire to September 30, 2018. The process for renewal and adjustment of the MOU is being conducted currently so that the Washoe Tribe may continue to seek funding for planning and implementation of projects at Meeks Meadow. Lastly, a Cooperative Agreement was signed in 1999 defining the shared mutual interest of both parties in restoring and enhancing wetlands and riparian areas through the application of traditional practices of the Washoe Tribe. The Cooperative Agreement gives the Washoe Tribe authority to: inventory environmental assets; develop restoration and enhancement plans; implement and monitor management actions; and apply for funding for planning, restoration, and management activities in Meeks Meadow. Long-term cultural management of the Project area will be conducted by the Washoe Tribe through a Stewardship Agreement formulated with the LTBMU.

The U.S. federal government's Department of the Interior implements the U.S. Fish and Wildlife Service (USFWS) Native American Policy, which was developed and adopted to help accomplish the agency's mission and concurrently to participate in fulfilling the federal government's and the Department of the Interior's trust responsibilities to assist Native Americans in protecting, conserving, and utilizing their reserved, treaty guaranteed, or statutorily identified trust assets. This policy is consistent with federal policy (Secretarial Order 3206, Sections 4 and 5) supporting Native American government self-determination and directs the consideration of TEK in federal land planning documents. This policy recognizes that the rich body of ecological knowledge that tribes possess has the potential to improve scientific understanding and management of public lands. The term Traditional Ecological Knowledge, or TEK, is used to describe the knowledge held by indigenous cultures about their immediate environment and the cultural practices that build on that knowledge. TEK includes an intimate and detailed knowledge of plants, animals, and natural phenomena, the development and use of appropriate technologies for hunting, fishing, trapping, agriculture, and forestry, and a holistic knowledge, or "world view" that parallels the scientific discipline of ecology (Berkes 1993).

The Project empowers the Washoe Tribe to reintroduce cultural land management practices back into the Lake Tahoe Basin through a robust partnership with federal, state, and non-profit agencies and to restore culturally significant flora and fauna that mimic beneficial historical indigenous conditions. This innovative Project serves as a model for large-scale future conservation efforts using TEK.

Historically, the Washoe Tribe's participation has been limited to primarily a "consultation" role for projects at Lake Tahoe, which diminishes the tribal legacy and history of environmental management of their aboriginal lands. This Project will develop a template for increased tribal involvement in and around the Lake Tahoe Basin for the foreseeable future, through working collectively and collaboratively with other agencies in the common goal of environmental conservation, stewardship, and sustainability. The name "Máyala Wata" recognizes the Washoe Tribe's name for Meeks Creek, which was utilized long before the introduction of the Euro-American name.

The Meeks Creek watershed has experienced logging, cattle grazing, and fire suppression. Timber was harvested from 1875 to 1895 on the western side of Lake Tahoe. Cattle also grazed the meadow in the 1930s. Hay crop was grown in the meadow for cattle consumption and has reduced the meadow's natural filtration system. Fire suppression since 1900 has also precipitated tree encroachment, resulting in lodgepole pine encroaching into the meadow. Bracken fern and other water filtering plants have declined as a result of fire suppression.

Meadows play important roles in hydrology, erosion control, nutrient cycling, providing wildlife habitat, cultural indigenous practices, and human recreation. Meadow drying in the Lake Tahoe Basin is a significant form of landscape change, often caused by lowering of the local groundwater table (Ratliff 1985; Wagoner 1986). Due to their high sensitivity to drying, montane meadows have been suggested to be early indicators of environmental changes that are associated with climate change (Debinski et al. 2000). The

water table of Meeks Meadow has declined over the years due to increasing conifer cover and subsequent water uptake. Inter-annual variability of climate, combined with fire suppression after the European settling of the Lake Tahoe Basin, are factors that have contributed to the invasion of Meeks Meadow by native lodgepole pine and other upland conifer species. These conifers are now encroaching farther into the meadow and creating pockets of upland habitat within the meadow, thus reducing water availability for meadow and riparian vegetation, lowering the meadow groundwater table, reducing the meadow's resilience to drought, and degrading habitat conditions for riparian-dependent species. The ability of indigenous people to use the meadow in a culturally historic manner has been reduced as a result.

The restoration of Meeks Meadow provides an opportunity for collaborative planning, as TEK enhances the knowledge base for decision-making about species and habitats, provides longitudinal knowledge for climate change-based projects, and builds relationships with tribes over natural resource topics of common interest (Greenwood and Rinkevich 2010).

2.4 Purpose and Need

The primary purpose of this Project is to restore Meeks Meadow using pre-European conditions for reference while managing for resiliency to prepare for uncertain future conditions. The intent of the Project is to restore the ecological and hydrological function of Meeks Meadow, which will in turn prepare these systems for natural disturbances in the future. Pre-European conditions are considered those that existed prior to Comstock logging, livestock grazing, mining, and fire suppression. Restoration to this condition, however, does recognize that other potential impacts including, but not limited to, climate change and current land use would prevent some historic characteristics from being fully restored. This restoration approach supports adaptations to changing future conditions, such as changing climate.

The needs for the Project are to:

- Restore physical (hydrological), biological (terrestrial and aquatic diversity and abundance), and ecological meadow processes (evapotranspiration) and functions (flow dispersal, groundwater recharge, sediment detention) that are appropriate for the current climate regime and comparable to reference conditions.
- Restore the natural fire disturbance regime in Meeks Meadow to enhance riparian habitat for native riparian-dependent species, increase meadow acreage, improve plant diversity and vigor, provide habitat for native species, increase water availability for wetland species, and provide wetter conditions for a longer duration each year.
- Provide diverse wildlife habitat for native riparian-dependent species, which is currently limited within the Lake Tahoe Basin due to past land management activities.
- Move the Project area toward a pre-fire suppression vegetative condition related to stand density, tree size class, and species composition to enable the reintroduction of fire into a fire-adapted ecosystem.
- Reduce the potential for a catastrophic wildland fire and provide for defensible space adjacent to communities.

2.5 Washoe Tribe of Nevada and California: A Vision Statement and Goals and Objectives

The Washoe Environmental Protection Department (WEPD) created the following vision statement for the Project:

> *The Mayala Wata Restoration Project empowers the Washoe Tribe of NV and CA to reintroduce cultural land management practices back into the Lake Tahoe Basin through a robust partnership*

with Federal, state, and non-profit agencies. The project will restore culturally significant flora and fauna that mimic beneficial historical indigenous conditions. This innovative project will serve as a model for large scale future conservation efforts using Traditional Ecological Knowledge (TEK).

The WEPD created the following goals and objectives for the Project:

Goal 1: Restore meadow function and condition

Objective A: Reduce conifer density and cover within the forested vegetation community groups.

Western management technique: conifer removal/thinning, broadcast burning

Objective B: Increase groundwater levels in the meadow and riparian vegetation community groups.

Western management technique: conifer removal/thinning, broadcast burning.

Objective C: Decrease the size of the lodgepole pine forest community. Increase the size of the meadow and riparian community groups. Target community size increases/decreases will be determined by results of baseline monitoring.

Western management technique: Conifer removal/thinning, broadcast burning

Cultural/adaptive management technique: periodic cultural (broadcast) burning

*Objective D: Increase the density/frequency of the below culturally significant plants within their respective vegetation communities. Target density/frequency increases will be determined by results of baseline monitoring. Other culturally significant native plants may be planted/seeded depending on availability (see full list in **Table 1**), but may not be included in monitoring.*

Cultural/adaptive management technique: Collection/trimming, planting, seeding, tilling, digging

- *Achillea millefolium* (yarrow)
- *Alnus incana* (mountain alder)
- *Fragaria virginiana* (mountain strawberry)
- *Pteridium aquilinum* (braken fern)
- *Salix* sp. (willow)
- *Calocedrus decurrens* (incense cedar)
- *Sambucus* sp. (elderberry)
- *Sarcodes sanguinea* (snow flower)
- *Rosa woodsii* (Woods' rose)

Objective E: Prevent the introduction and spread of the species on the Forest Service Invasive Plants of Management Concern.

Cultural/Adaptive management technique: monitoring, planting, seeding, digging

Goal 2: Demonstrate efficacy of TEK and Tribal Land Management Collaboration and Ability

Objective F: Continue cultural post-project monitoring and share results with Forest Service following each scheduled monitoring event. Collaborate with Forest Service on cultural/adaptive management desires/recommendations based on monitoring results.

Objective G: Present outcomes and on-going management issues and adaptive efforts at events, such as Bi-State TEK Summit, Tahoe Summit, Wa She Shu It' Deh, and other Tribally specific events.

Objective H: Update and continue the renewal of MOUs/Cooperative Agreements for collaborative cultural management of Meeks Meadow with Forest Service for foreseeable future. Provide education to Tribal leadership regarding MOU/Cooperative Agreement as needed.

Objective I: Continue to seek ongoing funding for post-project cultural monitoring.

Goal 3: Improve Tribal connection to Aboriginal Lands and Meeks Meadow through Outreach and Educational Activities

Objective J: Increase Tribal interaction with the meadow through scheduled events, such as guided management workshops, crew workdays, youth educational events, elder luncheons, and other such events.

Objective K: Continue to seek ongoing funding for education activities and support.

2.6 Project Location, Setting, and Surrounding Land Uses

Figure 1 illustrates the Project vicinity. **Figure 2**, Project Area Map, depicts the Project area boundary. Land uses surrounding the Project area include a boundary with Desolation Wilderness, State Route (SR) 89 right-of-way, Meeks Bay Marina and Campground, the developed residential areas adjoining Rubicon Bay, and Sugar Pine Point State Park, which is part of the State of California Park system.

The Project area is located within the TRPA Plan Area Statement (PAS) for Meeks Creek (PAS 148) and has a land use classification of Conservation and zoning district of Open Space. The area serves as a trailhead to Desolation Wilderness. Resource management is an allowed Permissible Use in PAS 148.

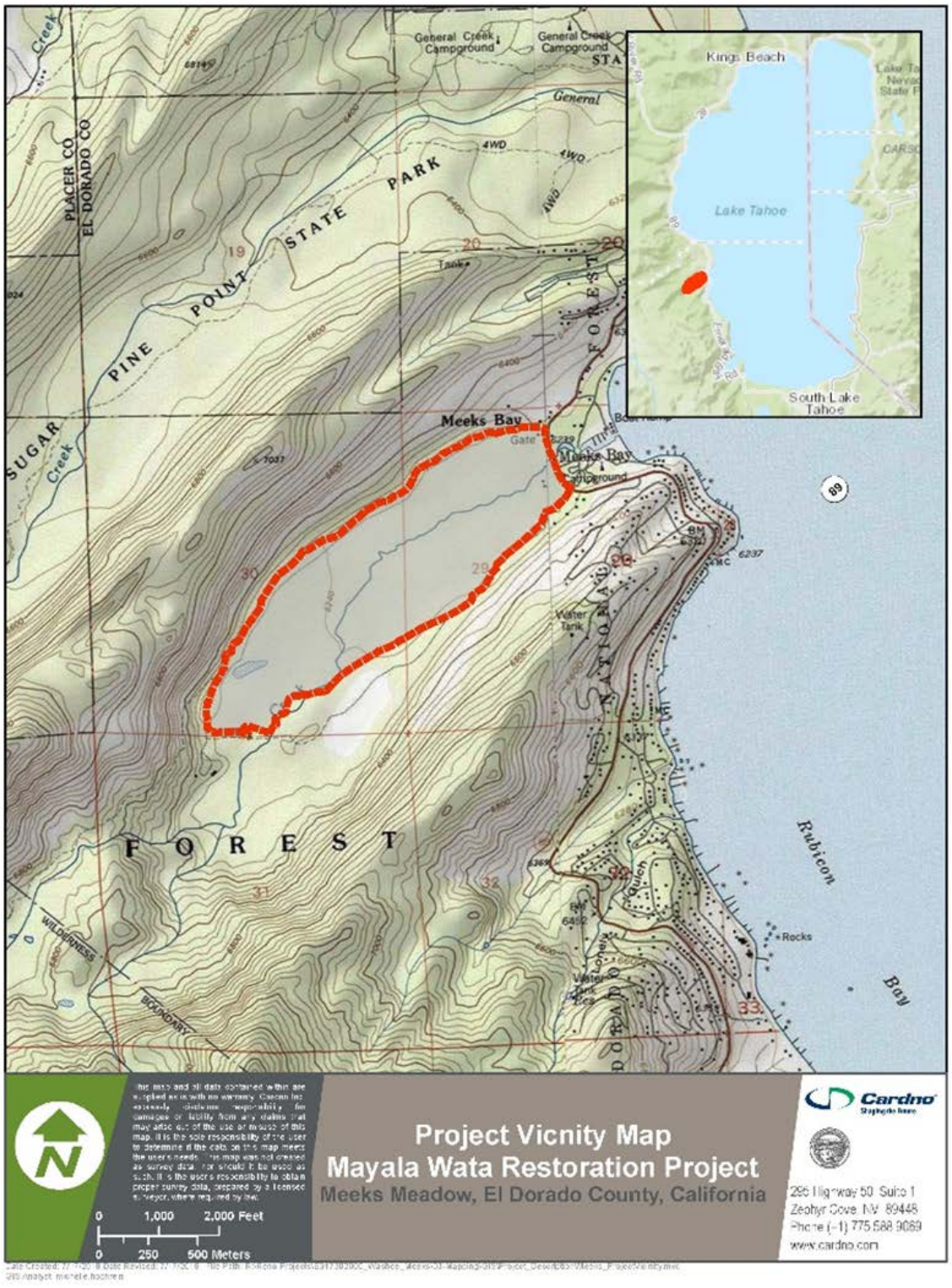

Figure 1 Project Vicinity.

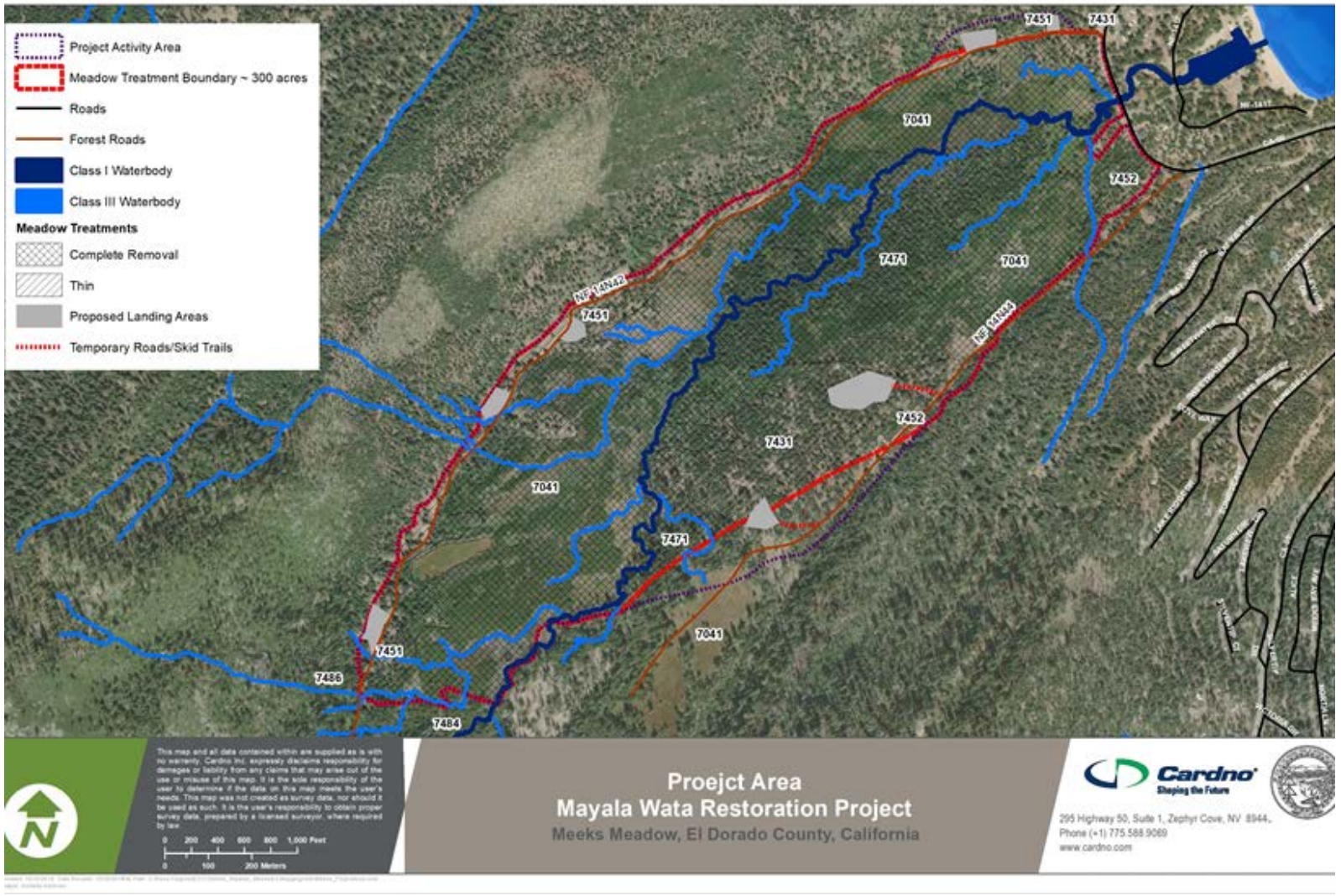

Figure 2 Project Area Map.

2.7 Public Involvement

Opportunities for public participation in the environmental document review process are provided in order to promote open communication and better decision-making. Persons and organizations having a potential interest in the Project are invited to provide comments during the 30-day comment period for the IS ending on March 1, 2019.

Pursuant to the requirements of CEQA, this IS/ND is sent, along with a Notice of Completion form, to the California State Clearinghouse. In addition, copies of this document will be distributed to other Lake Tahoe Basin reviewing agencies and interested individuals and entities for review. After closure of the public review period, lead agency staff will consider comments received and may prepare a response to comments. A Notice of Determination will be signed by the Lahontan Water Board Executive Officer and filed with the county recorder-clerk and State Clearinghouse.

The environmental review process for the Project began with a public scoping period. A Notice of Intent and request for early consultation was issued to inform agencies and the public that an IS would be prepared for the Project, and to solicit views of agencies and the public as to the scope and content of the IS. The Notice of Intent was distributed on November 20, 2018, and the scoping period concluded on December 14, 2018. Scoping notices were mailed to governmental agencies, landowners within the Project area boundaries, interested individuals, and community organizations. Four comment letters were received:

1. Antonio Ruiz, Wilton Rancheria (November 27, 2018);
2. Native American Heritage Commission (December 3, 2018);
3. Daniel Shaw, California Department of Parks and Recreation (December 14, 2018); and
4. Ed Silva, Wilton Rancheria (January 14, 2019).

In addition to public notification for CEQA, public notification and comment was previously conducted by the Forest Service during NEPA compliance. The Project was listed on the LTBMU's Schedule of Proposed Action on April 1, 2009. The scoping period began on June 22, 2012, and ended on July 23, 2012. Public scoping included mailing 48 scoping letters to interested parties. Additionally, the scoping package including the proposed action was posted on the LTBMU website. Two letters and two phone calls were received. A response to all comments can be found in the Project record. Responses were generally supportive. In most cases, responses were requesting more detailed information or clarification on portions of the proposed action. The Washoe Tribe supported the proposed action. The TRPA did not respond; however, staff were informed and supported Project efforts during a field trip on July 27, 2011. This field trip also included staff from both the Washoe Tribe and the Lahontan Water Board. An additional field trip was taken on August 2, 2012, with members of the Interdisciplinary Team and staff from the Lahontan Water Board.

An objection period was provided pursuant to NEPA statutes and to the March 19, 2012, order issued by the U.S. District Court for the Eastern District of California in Case No. CV Fl 1-679LJ0 DLB. The legal notice for comment was published on September 7, 2012, in the *Tahoe Daily Tribune*. Only those who provided comments during this comment period are eligible to appeal the decision pursuant to 36 Code of Federal Regulations (CFR) 215. Since no comments were received, an appeal period was not required. The Forest Service issued the signed Decision Memorandum on May 20, 2013.

The WEPD is developing educational materials to inform both tribal and non-tribal entities of planned and ongoing activities at Meeks Meadow. To ensure the overall success of the Project, tribal members, including but not limited to, elders, youth, as well as other tribal departments within the Washoe Tribe have been solicited for public involvement throughout the planning phase and have made contributions toward the development of the Project's vision statement, goals and objectives, purpose and need, and proposed

actions. The educational materials will provide tribal members with a quarterly update of the status of the Project. Listed below are the materials WEPD is developing:

- Prepare section for the Mayala Wata Restoration Planning Project for Meeks Meadow in WEPD newsletter (quarterly).
- Provide updated handouts about the Project throughout the planning phase, and when restoration milestones are achieved within the meadow. Information will be made available at upcoming events:
  - Lake Tahoe Summit
  - Wa-She-Shu-It-Deh Festival
  - WEPD Earth Day
  - Washoe Picnic
  - Elder Site Council presentation at Meeks Bay.
- Conduct regular meetings with the Washoe Cultural Resource Advisory Council for input on the Cultural Management Plan.
- Conduct meetings with tribal members who have experience with high-elevation meadows in the Lake Tahoe Basin.
- Create a picture book of the culturally significant vegetation with plant descriptions for easier identification.
- Provide vegetation monitoring training for tribal staff and youth.
- Distribute draft of the Washoe Tribe Cultural Management Plan document (specific to Meeks Meadow) to community council members and tribal leadership for review.
- Submit monthly reports to Tribal Council, summarizing progress made on the restoration efforts.
- Make the final Cultural Management Plan summary available on the Washoe Tribe's website.
- Coordinate with partner agencies on press briefing, including a press release.
- Document the implementation process (photos, videos, slideshows, etc.).

2.8 Relationship to Land Use Plans, Policies, and Regulations

The Project falls under the direct jurisdiction of the Lahontan Water Board, Forest Service, and TRPA. In addition, federal and state agencies exercise varying levels of control concerning specific resources. This section identifies each agency's responsibility relative to the Project; it also identifies the acts, plans, and policies with which the Project must show compliance for use in Lahontan Water Board, Forest Service, and TRPA-approved project actions.

2.8.1 Federal

2.8.1.1 *Forest Service Lake Tahoe Basin Management Unit*

The current LTBMU *Land Management Plan*, also known as the Forest Plan was revised and adopted in 2016 (Forest Service 2016). The Forest Plan provides strategic guidance to the LTBMU for forest management over approximately the next 15 years. The plan guides the restoration or maintenance of the health of the land to promote a sustainable flow of uses, benefits, products, services, and visitor opportunities. The plan provides a framework for informed decision-making, while guiding resource management programs, practices, uses, and projects. The Forest Plan does not grant, withhold, or modify any contract, permit, or other legal instrument and does not authorize projects or activities. Decisions to approve or authorize specific projects are considered separately, and decisions must be consistent with the applicable plan management direction. NEPA compliance is required for any project-level decision that

may have an impact on the environment. Project-level decisions must be informed by site-specific analysis through an open, public process.

The LTBMU conducts Section 106 consultations or reviews in accordance with the provisions in the *First Amended Programmatic Agreement among the USDA Forest Service, Pacific Southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Act for Management of Historic Properties by the National Forests of the Pacific Southwest Region* (Programmatic Agreement).

2.8.1.2 *Federal Clean Water Act*

The Clean Water Act (CWA) (33 U.S. Code [U.S.C.] Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Point source discharges are regulated by the National Pollution Discharge Elimination System (NPDES) permit process (CWA Section 402). Section 401 of the CWA regulates surface water quality and requires a Water Quality Certification for federal actions (including construction activities) that may entail impacts to surface water. The Lahontan Water Board has jurisdiction over the Project area.

2.8.1.3 *Federal Clean Air Act*

The federal Clean Air Act (CAA) establishes the framework for modern air pollution control. The federal CAA, enacted in 1970 and amended in 1990, directs the U.S. Environmental Protection Agency (EPA) to establish ambient air quality standards for six pollutants: ozone (O_3), carbon monoxide (CO), lead, nitrogen dioxide (NO_2), particulate matter less than 10 microns (PM_{10}) and 2.5 microns ($PM_{2.5}$) in diameter, and sulfur dioxide (SO_2). These standards are divided into primary and secondary standards; the former are set to protect human health, while the latter are set to protect environmental values, such as plant and animal life.

2.8.1.4 *Migratory Bird Treaty Act of 1918 and Bald and Gold Eagle Protection Act*

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. Section 703-711) and the Bald and Golden Eagle Protection Act (BAGEPA) (16 U.S.C. Section 668) protect specific species of birds and prohibit "take" (i.e., harm or harassment). The MBTA protects migrant bird species from "take" through setting hunting limits and seasons, and protecting occupied nests and eggs (USFWS 2017a). BAGEPA prohibits the take or commerce of any part of the bald or golden eagle (USFWS 2017b). The USFWS administers both the MBTA and BAGEPA and reviews actions that may affect species protected under each act.

2.8.1.5 *National Historic Preservation Act*

Most regulations at the federal level stem from the NEPA and historic preservation legislation such as the National Historic Preservation Act (NHPA) of 1966, as amended. The NHPA established guidelines to "preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice." The NHPA includes regulations (Section 106) that pertain to all projects (including the proposed Project) that are funded, permitted, or approved by any federal agency and that have the potential to affect cultural resources. Provisions of the NHPA establish the National Register of Historic Places, which is maintained by the National Park Service, the Advisory Council on Historic Preservation, State Historic Preservation Offices, and grants-in-aid programs. The LTBMU conducts Section 106 consultations or reviews in accordance with the PA provisions.

2.8.1.6 *American Indian Religious Freedom Act and Native American Graves Protection and Repatriation Act*

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves Protection and Repatriation Act of 1990.

2.8.2 State

2.8.2.1 *Porter-Cologne Water Quality Control Act*

The State of California established the State Water Resources Control Board (State Water Board), and the nine Regional Water Quality Control Boards (RWQCBs), through the Porter-Cologne Water Quality Control Act. Through the enforcement of the Porter-Cologne Water Quality Control Act, the Water Boards determines the beneficial uses of the waters (surface and groundwater) of the State, establishes narrative and/or numerical water quality standards, and initiates policies relating to water quality. The State Water Board and, more specifically, the RWQCBs, are authorized to prescribe waste discharge requirements for the discharge of waste that may impact waters of the State. Furthermore, the development of water quality control plans, or Basin Plans, are required by the Porter-Cologne Water Quality Control Act to protect water quality.

2.8.2.2 *Regional Water Quality Control Board – Lahontan Region*

California state law assigns responsibility for protection of water quality within the Lahontan watershed basin to the Lahontan Water Board. The Lahontan Water Board implements and enforces the Porter-Cologne Water Quality Control Act (California Water Code Section 1300 et seq.) and the *Water Quality Control Plan for the Lahontan Region* (Lahontan Basin Plan). The Lahontan Water Board has water quality authority on the California side of the Lake Tahoe Basin and establishes water quality standards, subject to the approval of the State Water Board. By issuing waste discharge permits and requiring monitoring to show compliance, among other activities, the Lahontan Water Board actively enforces attainment of standards.

The Lahontan Water Board is the lead agency for the Project under the provisions of CEQA, and other state agencies (e.g., California Department of Fish and Wildlife [CDFW]) will participate as responsible agencies. CEQA requires that state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

The State Anti-degradation Policy (Resolution No. 68-16) is incorporated into regional water quality control plans, including the Lahontan Basin Plan. The policy applies to high-quality waters only (i.e., Lake Tahoe and tributaries) and requires that existing high quality be maintained to the maximum extent possible. The Project must implement reasonable and appropriate measures for the protection of surface water quality and beneficial uses. The Project requires enrollment in Board Order No. R6T-2014-0030, Timber Harvest and Vegetation Management Activities in the Lahontan Region (the 2014 Timber Waiver).

2.8.2.3 *California Clean Air Act*

The California CAA focuses on attainment of the California Ambient Air Quality Standards (CAAQS). These standards are more stringent than federal regulations with respect to certain criteria pollutants and averaging periods. Responsibility for monitoring the CAAQS is placed on the California Air Resources Board (CARB) and local air pollution control districts.

The CARB regulates prescribed burning in California in accordance with the State Implementation Plan (SIP). The *Smoke Management Guidelines for Agricultural and Prescribed Burning*, adopted by the CARB

at its meeting on March 23, 2000, provide the framework for state and local air district regulators to conduct the Burn Permit program. Elements of the program include:

- Registering and Permitting of Agricultural and Prescribed Burns;
- Meteorological and Smoke Management Forecasting;
- Daily Burn Authorization; and
- Enforcement.

In the spring of 2011, staff of the CARB, federal and state land management agencies, and air districts in California worked together to revise the policy that governs the management of naturally ignited fires. The protocol, entitled *Coordination and Communication Protocol for Naturally Ignited Fires*, establishes a framework under which smoke and emission impacts from all wildfires will be minimized. Prescribed burning will be coordinated with the state and will follow the SIP to protect air resources, including obtaining and following permits from El Dorado County Air Quality Management District (AQMD).

2.8.2.4 *California Endangered Species Act*

Under the California Endangered Species Act (CESA), CDFW has the responsibility for maintaining a list of threatened and endangered species (California Fish and Game Code § 2070). CDFW also maintains a list of candidate species, which are those species formally under review for addition to either the list of endangered species or the list of threatened species. In addition, CDFW maintains a list of "species of special concern," which serves as a watch list.

The CESA prohibits the take of plant and animal species that the California Fish and Game Commission has designated as either threatened or endangered in California. "Take" in the context of the CESA means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill a listed species (California Fish and Game Code § 86). The take prohibitions also apply to candidates for listing under the CESA. However, Section 2081 of the CESA allows CDFW to authorize exceptions to the state's take prohibition for educational, scientific, or management purposes.

In accordance with the requirements of the CESA, an agency reviewing a project within its jurisdiction must determine if any state-listed endangered or threatened species could be present in the project area. The agency also must determine if the project could have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any project that could affect a candidate species.

2.8.2.5 *California Fish and Game Code*

Certain species are considered fully protected, meaning that the code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 of the California Fish and Game Code lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals. It is possible for a species to be protected under the California Fish and Game Code, but not fully protected. For instance, mountain lion (*Puma concolor*) is protected under Section 4800 et seq., but is not a fully protected species.

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 of the code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Migratory non-game birds are protected under Section 3800, while other specified birds are protected under Section 3505.

2.8.2.6 *CEQA, Public Resources Code Section 21083.2, and CEQA Guidelines 15064.5*

CEQA, PRC Section 21083.2, and CEQA Guidelines 15064.5 include provisions for significance criteria related to archaeological and historical resources. A significant archaeological or historical resource is

defined as one that (1) meets the criteria of the California Register of Historical Resources (CRHR), (2) is included in a local register of historical resources, or (3) is determined by the lead agency to be historically significant. A significant impact is characterized as a "substantial adverse change in the significance of a historical resource." PRC Section 5024.1 authorizes the establishment of the CRHR. Any identified cultural resources must therefore be evaluated against the CRHR criteria.

CEQA includes in its definition of historical resources "any object [or] site …that has yielded or may be likely to yield information important in prehistory" (14 California Code of Regulations [CCR] 15064.5[3]), which is typically interpreted as including fossil materials and other paleontological resources. More specifically, destruction of a "unique paleontological resource or site or unique geologic feature" constitutes a significant impact under CEQA per state CEQA Guidelines Appendix G.

Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources for a project area; assessment of potential impacts on significant or unique resources; and development of mitigation measures for potentially significant impacts, which may include monitoring, combined with data recovery excavation and/or avoidance.

2.8.2.7 *Public Resources Code Section 5024.1, California Register of Historical Resources*

In order to be determined eligible for listing in the CRHR, a property must be significant at the local, state, or national level under one or more of the following four criteria as defined in PRC 5024.1 and CEQA Guideline 15064.5(a): (1) It is associated with events or patterns of events that have made a significant contribution to the broad patterns of the history and cultural heritage of California and the United States; (2) It is associated with the lives of persons important to the nation or to California's past; (3) It 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; and (4) It has yielded, or may be likely to yield, information important to the prehistory or history of the state and the nation.

In addition to meeting one or more of the above criteria, a significant property must also retain integrity. Properties eligible for listing in the CRHR must retain enough of their historic character to convey the reason(s) for their significance. Integrity is judged in relation to location, design, setting, materials, workmanship, feeling, and association.

2.8.2.8 *Public Resources Code Section 21083.2, Treatment of Unique Archaeological Resources*

PRC Section 21083.2 governs the treatment of unique archaeological resources, defined as "an archaeological artifact, object, or site about which it can be clearly demonstrated" that it meets any of the following criteria: contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; has a special and particular quality such as being the oldest of its type or the best example of its type; is directly associated with a scientifically recognized important prehistoric or historic event or person; or if it can be demonstrated that a project will cause damage to a unique archaeological resource, appropriate mitigation measures shall be required to preserve the resource in place and in an undisturbed state. Mitigation measures may include, but are not limited to, (1) planning construction to avoid the site, (2) deeding conservation easements, or (3) capping the site prior to construction. If a resource is determined to be a "non-unique archaeological resource," no further consideration of the resource by the lead agency is necessary.

2.8.2.9 *Public Resources Code Section 7050.5, Encountering Human Remains*

The possibility of encountering human remains cannot be entirely discounted. Pursuant to PRC Section 7050.5, if human graves are encountered, work should halt in the vicinity and the County Coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If human remains are of Native American origin, the coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification.

2.8.2.10 *Assembly Bill 52 (Public Resources Code Section 21084.2)*

Assembly Bill (AB) 52 changes sections of the PRC to add consideration of Native American culture within CEQA. The goal of AB 52 is to promote the involvement of California Native American tribes in the decision-making process when it comes to identifying and developing mitigation for impacts to resources of importance to their culture. To reach this goal, the bill establishes a formal role for tribes in the CEQA process. CEQA lead agencies are required to consult with tribes about potential tribal cultural resources in the project area, the potential significance of project impacts, the development of project alternatives, and the type of environmental document that should be prepared. AB 52 specifically states that a project that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.

2.8.2.11 *California State Historic Preservation Office*

The NHPA's implementing regulations, as set forth in Title 36 CFR Parts 800 et seq., require federal agencies to take into account the effects of their undertakings on historic properties and consult with stakeholders, including the State Historic Preservation Office, on potential effects to resources that are listed or eligible for listing in the National Register of Historic Places.

2.8.2.12 *El Dorado County Air Quality Management District*

The El Dorado County AQMD works to improve air quality and quality of life for El Dorado County residents. To control the generation of fugitive dust during project implementation, projects in El Dorado County must conform to Rule 223, Fugitive Dust, specifically Rule 223.1, Construction, Bulk Material Handling, Blasting, Other Earthmoving Activities and Carryout and Trackout Prevention. The Project will require an AQMD Burn Permit, which is a permit issued by the El Dorado County AQMD during the non-fire season and is detailed more in Section 3.18.

2.8.2.13 *Greenhouse Gas State Regulations*

There are a variety of statewide rules and regulations that have been implemented or are in development in California that mandate the quantification or reduction of greenhouse gases (GHGs). Under CEQA, analysis and mitigation of emissions of GHGs and climate change in relation to a proposed project are required where it has been determined that a project would result in a significant addition of GHGs. Certain Air Pollution Control Districts have proposed their own levels of significance. The El Dorado County AQMD, which has regulatory authority over the air emissions from this Project, has not established a significance threshold for GHG emissions.

Executive Order S-3-05: Executive Order S-3-05 was established by Governor Arnold Schwarzenegger in June 2006 and establishes the following statewide emission reduction targets through the year 2050:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

This executive order does not include any specific requirements that would pertain directly to the proposed Project. However, actions taken by the state to implement these goals may affect the proposed Project, depending on the specific implementation measures that are developed.

AB 32: AB 32, also known as the California Global Warming Solutions Act of 2006, was established in 2006 to mandate the quantification and reduction of GHGs to 1990 levels by 2020. The law establishes periodic targets for reductions, and requires certain facilities to report emissions of GHGs annually. The bill also reserves the ability to reduce emissions targets lower than those proposed in certain sectors that contribute the most to emissions of GHGs, including transportation. Additionally, the bill requires:

- GHG emission standards to be implemented by 2012; and
- CARB to develop an implementation program and adopt GHG control measures "to achieve the maximum technologically feasible and cost-effective GHG emission reductions from sources or categories of sources."

CARB issued a draft *Climate Change Scoping Plan* in December 2008 that contains the main strategies California will use to reduce the GHGs that cause climate change. The scoping plan has a range of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 cost of implementation fee regulation to fund the program.

2.8.2.14 *Hazardous Waste Control Act*

The Hazardous Waste Control Act created the state hazardous waste management program, which is similar to, but more stringent than, the federal Resource Conservation and Recovery Act program. The act is implemented by regulations contained in Title 26 CCR, which describes the following required aspects for the proper management of hazardous waste:

- Identification and classification;
- Generation and transport;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;
- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of them. Under the Hazardous Waste Control Act and Title 26 CCR, the generator of hazardous waste must complete a manifest that accompanies the waste from the generator to the transporter to the ultimate disposal location.

2.8.3 Regional

2.8.3.1 *Tahoe Regional Planning Agency*

TRPA is a bi-state planning agency with the authority to regulate growth and development in the Lake Tahoe region. TRPA implements that authority through its Regional Plan Update (RPU) (TRPA 2012). The plan's goals and policies establish an overall framework for development and environmental conservation in the region.

Projects, studies, and programs listed in the TRPA EIP are considered part of the capital improvement programs for the *208 Water Quality Plan*. The Project contributes toward attainment of TRPA water quality thresholds and Lahontan Water Board's water quality objectives (WQOs) for specific waterbodies and general hydrologic areas through Project benefits such as environmental protection of air and water quality and of sensitive lands. The Project provides for an incremental step in meeting the basin-wide water quality thresholds through implementation of TRPA EIP Project 01.02.02.0038.

The TRPA Code of Ordinances (TRPA Code) contains minimum development standards for future development. It is intended to implement goals and policies in a manner that attains or maintains the environmental thresholds' carrying capacities. Activities that may have a substantial effect on the land, air, water, space, or any other natural resources in the Lake Tahoe region are subject to TRPA review and approval and pursuant to the applicable TRPA Code chapters and mandatory findings.

In 1982, TRPA adopted nine environmental threshold carrying capacities (thresholds), which set environmental standards for the Lake Tahoe Basin and indirectly define the capacity of the region to accommodate additional land development. The EIP is intended to accelerate threshold attainment. These thresholds and goals are defined as follows:

- *Water Quality: Return the lake to 1960s water clarity and algal levels by reducing nutrient and sediment in surface runoff and groundwater.*
- *Soil Conservation: Preserve natural stream environment zones (SEZ), restore 25% of disturbed urban SEZ areas (1,100 acres), and reduce total land coverage.*
- *Air Quality: Achieve strictest of federal, state, or regional standards for carbon monoxide, ozone, and particulates; increase visibility; reduce U.S. 50 traffic; and reduce vehicle miles of travel.*
- *Vegetation: Increase plant diversity in forests, preserve uncommon plant communities including deepwater plants, enhance late seral forests and reduce forest fuels, and maintain minimum sustainable populations of sensitive plants including Tahoe Yellow Cress.*
- *Wildlife: Provide habitat for special interest species, prevent degradation of habitats of special significance.*
- *Fisheries: Maintain 180 miles of good to excellent stream habitat, achieve nearly 6,000 acres of excellent lake habitat, and attempt to reintroduce Lahontan Cutthroat Trout.*
- *Scenic Resources: Maintain or improve 1982 roadway and shoreline scenic travel route ratings, maintain or improve views of individual scenic resources, and maintain or improve quality of views from public outdoor recreation areas.*
- *Noise: Minimize noise disturbance from single events, and minimize background noise disturbance in accordance with land use patterns.*
- *Recreation: Preserve and enhance a high quality recreational experience. Preserve undeveloped shorezone and other natural areas, and maintain a fair share of recreational capacity for the general public.*

2.8.4 Local

2.8.4.1 *Washoe Tribe of Nevada and California*

The Washoe Tribe is a federally recognized tribal government that is governed by its Tribal Council. The Tribal Council comprises three tribal-wide elected officials, two elected representatives from each of the four community councils, two off-reservation elected representatives, and one elected representative of the Reno/Sparks Indian Colony. The affairs and policies of the Washoe Tribe are governed according to the Washoe Tribe Constitution and Bylaws, as adopted in 1966, and amended in 1990. It is the policy of the Washoe Tribe to protect, maintain, and enhance its natural resources for the benefit of present and future generations, in accordance with Law and Order Code Title 17 – Environmental Protection Code. The Washoe Tribe recognizes that the actions of persons who are not continually located or residing on tribal lands often profoundly affect the health, safely, and welfare of the tribe, its members, and territory lands. Thus, the Washoe Tribe has an interest in protecting natural resources both on and off tribal lands. The WEPD was established in the Washoe Tribal government structure in 1998. WEPD is responsible for protecting natural and cultural resources and managing lands within the traditional territory and over 73,500 acres of trust and fee lands.

An MOU between the Washoe Tribe and LTBMU was signed in 1997, which established a Government-to-Government relationship, protocols, and responsibilities, recognizing common land management and

conservation goals. A project agreement was also signed in 1997 that described the intent of the LTBMU to issue a 30-year special use permit to the Washoe Tribe to manage Meeks Meadow for cultural and traditional purposes. The Meeks Bay Resort and Marina Special Use Permit was applied for and issued in late 1997. The intent of this project agreement was to re-establish a Washoe Tribal presence at Lake Tahoe and to revitalize ecological and cultural knowledge in traditional ancestral lands. In 1998, an MOU between the two parties was signed recognizing the need for sustainable management of wetland, riparian areas, and native vegetation at Meeks Meadow. The Washoe Tribe agreed to assist with the maintenance of the area as a meadow, having the ability to use hand tools, mechanical equipment, prescribed fire, or other activities, providing the LTBMU with a native plant management plan and NEPA analysis where necessary. On February 26, 1999, an MOU between the two parties was signed, recognizing the need for the sustainable management of wetlands, riparian areas, and native vegetation at Meeks Meadow. Renewal of agreements made under this MOU were set to expire to September 30, 2018. The process for renewal and adjustment of the MOU is being conducted currently so that the Washoe Tribe may continue to seek funding for planning and implementation of projects at Meeks Meadow.

Lastly, a Cooperative Agreement was signed in 1999 defining the shared mutual interest of both parties in restoring and enhancing wetlands and riparian areas by the application of tradition practices of the tribe and other ecological restoration activities. In consultation, cooperation, and upon authorization of the LTBMU, the Cooperative Agreement gives the tribe authority to inventory environmental assets, develop restoration and enhancement plans, implement and monitor management actions, and apply for funding for planning, restoration, and management activities in the Meeks Bay wetlands area.

Project implementation and long-term cultural management of the Project area will be conducted by the Washoe Tribe and LTBMU through a jointly-formulated Stewardship Agreement.

3.0 PROJECT DESCRIPTION

The following section describes the Project and details the proposed Project actions, including: location; detailed Project description; surrounding land use; land capability and disturbance; Project phasing, schedule and equipment; site access, staging areas, and parking; site cleanup and restoration; and design features, best management practices (BMPs), and resource protection measures (RPMs).

3.1 Proposed Project

The Project will restore approximately 300 acres of meadow habitat in the Meeks Meadow complex. **Figure 2**, Project Area Map, illustrates the extent of Meeks Meadow and location of the Meeks Creek channel and depicts the areas of proposed conifer removal and conifer thinning, locations of up to seven landings, and the existing Forest Service roads along the northern and southern boundaries of Meeks Meadow.

Through 2014 Timber Waiver Category 6 enrollment, the Forest Service and Washoe Tribe will solicit and administer a contract to first thin and remove encroaching conifers. Application of prescribed fire by Forest Service and Washoe Tribe burn crews will follow as field and weather conditions allow. The Washoe Tribe will follow these initial actions with implementation of meadow vegetation management that is based on TEK. Through Timber Waiver Category 2 enrollment, the Washoe Tribe will implement long-term cultural management of the meadow complex. The proposed Project actions are detailed in Sections 3.3 through 3.17.

3.2 Project Location

Meeks Meadow is located within the Forest Service's Meeks Management Area on the western shore of Lake Tahoe in El Dorado County, California, in Section 29, the SE ¼ of Section 30, and the NW ¼ of Section 31, Township 14 North, Range 17 East, of the Homewood, California, quadrangle map. **Figure 1** illustrates the Project vicinity.

The Project area is accessed from SR 89 in Meeks Bay, El Dorado County, California. While traveling north, take a right hand turn from SR 89 onto Forest Service Road 14N42, which travels along the northern edge of Meeks Meadow, or take a right turn onto Forest Service Road 14N44, which travels along the southern edge of Meeks Meadow.

3.3 Pre-Project Surveys

Prior to Project implementation, surveys for willow flycatchers (*Empidonax traillii*) would be conducted to determine the locations of any active nests. If nests are found, they will be protected in accordance with the Sierra Nevada Forest Plan Amendment (SNFPA) (Forest Service 2004a), which prohibits thinning, prescribed fire, and restoration activities within suitable habitat surrounding the active nest sites between June 1 and August 31.

The marsh skullcap (*Scutellaria galericulata*), a Forest Service special interest species, was identified in the Project area and will be monitored pre- and post-Project implementation. This is the only targeted rare plant species that was identified in the Project area. Project activities will be allowed to occur within this population, because this Project is expected to improve habitat for this species. Lamb et al. (2003) found that this species increased in abundance at burn sites and hypothesized the increased population was a result of increased light from removal of the canopy.

Known weed infestations will be monitored and surveyed for new occurrences in portions of the Project area with a focus on landings prior to implementation. Weed infestations within the treatment area or along

travel routes associated with the Project area will be treated using approved methods, or flagged and avoided according to the species present and Project constraints. As of 2011 surveys, the only invasive species known to occur in the project area is cheatgrass (*Bromus tectorum*).

3.4 Site Access, Staging Areas, and Parking

Site access will occur from SR 89 and existing Forest Service Roads 14N42 and 14N44. Stage areas will be delineated along the upland side of the access routes and within the proposed landings. Meeks Bay Marina, Meeks Bay Fire Station, and the Forest Service access roads will provide for adequate worker parking.

3.5 Mobilization, Site Preparation, and Public Safety

Project information and potential effects to Desolation Wilderness access will be posted on the LTBMU and Eldorado National Forest public websites, as well as the Pacific Crest Trail Association website as soon as Project implementation schedule is known.

Some road maintenance will be conducted on Forest Service Roads 14N42 and 14N44 for Project implementation. Maintenance activities will not be undertaken to accomplish substantial improvements in road standard, to make extensive repairs, or to raise the traffic service level such that the roads will be passable to standard four-wheel passenger cars.

Road maintenance activities include the removal of trees along the existing access roads (necessary for equipment access and staging) and then skimming of ground cover and removal of root systems, rocks, etc. from the road surface to provide a suitable surface for equipment to travel. Grading will be conducted where the gradient allows for outsloping of the road prism. The formation of berms will be avoided, and if berms do form as a result of grading actions, berms will be breached to allow for outflow of surface waters to adjacent undisturbed areas. These native surface roads will be maintained throughout Project implementation. Roads will be watered for dust abatement.

Two temporary roads, approximately 300 and 375 feet in length each, will be constructed to allow for timber haul trucks to access two landings that will be established off of Forest Service Road 14N44, in the southern portion of the Project area.

The existing Meeks Creek channel system includes ephemeral drainages (e.g., a Timber Waiver Class III waterbody) that convey spring surface runoff into the meadow complex and during the more extreme spring runoff years are hydrologically connected to the main Meeks Creek channel (e.g., a Timber Waiver Class I waterbody). To conform to the Category 6 Timber Waiver conditions and category-specific criteria, the Forest Service has designated travel ways for Cut to Length (CTL) equipment that allows for site access with installation of temporary watercourse crossings. Field verifications conducted on August 8, 2018, determined that the existing ephemeral crossings along Forest Service Roads 14N42 and 14N44 do not require maintenance or improvements. **Figure 2** illustrates the existing crossing of 14N42 in the far western Project area and temporary Class III drainages.

Project implementation poses a potential threat to public safety from falling trees, equipment traffic, lower visibility around operating equipment and crews, flying debris, and prescribed fire. Public and contractor safety areas will be designated adjacent to Project work and flagged and signed appropriately. The Project will maintain truck traffic communications and offer an alternate access to the Desolation Wilderness trailhead utilizing existing disturbance areas (i.e., no new trails will be constructed).

When contractor operations pose a safety hazard to the public that cannot be mitigated, a temporary Forest Closure Order may be required, closing public use of Forest Service Roads 14N42 and 14N44 where Project work is occurring, as necessary. Road 14N42 provides access to a Desolation Wilderness trailhead. Closure

of this road would only occur if it were not possible to protect public users and provide alternate access to the trailhead.

A Communication and Sign Plan will be implemented that includes signage posted at the access road and trailhead, as well as other trailheads from which Desolation Wilderness users might access the area, that describe the purpose of the Project and safe travel suggestions. Permitting locations for Desolation Wilderness (including the William Kent campground, Pacific Ranger District, Taylor Creek Visitor Center, and LTBMU Supervisor's Office) will be informed regarding Project activities and potential short-term road closures.

3.6 Landings

Landings are areas where forest products are concentrated prior to additional processing or removal from a project area. Where previous disturbance or openings are not available, new landings will be constructed. Landings have been sited adjacent to the existing Forest Service access roads along the north side of the Project area and as close as possible to the existing road along the south side of the Project area, as illustrated in **Figure 2**. Two temporary roads will be created to access landings from the south side. Landings will be no larger than 2 acres in order to safely facilitate the handling and removal of material (e.g., logs, biomass). Constructed landings may require removal of trees larger than 30-inch diameter at breast height (dbh), but removal will be minimized through field fitting the landing locations. Landings will not be located in TRPA-designated Stream Environment Zones (SEZ).

Landings pose potential short term visual impacts; however, landings will be rehabilitated post implementation. Revegetation and rehabilitation will include spreading chip, subsoiling to a minimum depth of 12 inches, reseeding with native species, and spreading meadow mowing clippings as ground cover.

3.7 Conifer Removal – Forest Service

3.7.1 Mechanical Treatments/Ground-Based Equipment Operations

The Project area will be treated using a combination of mechanical and hand treatments. Ground-based equipment operations include tractor, vehicle, equipment, and heavy equipment operations and does not include work conducted by hand crews, helicopter, or cable yarding. The mechanical treatments will include conifer thinning, removal, and girdling. Treatments are generally defined as follows:

- Thinning is the act of falling a tree or multiple trees to reduce stand density.
- Removal is the act of removing a tree or multiple trees from the site to which the tree or multiple trees were felled.
- CTL logging refers to a mechanized harvesting system in which trees are delimbed and cut to length directly at the stump. CTL is typically a two-person, two-machine operation with a harvester felling, delimbing, and bucking trees and a forwarder transporting the logs from the felling to a landing area close to a road accessible by trucks. Both pieces of equipment are designed to operate on the slash and limbs generated during harvesting operations, with limited ground contact or disturbance.
- Girdling is the removal of a strip of bark around the entire circumference of a tree or woody shrub. A tree's nutrients travel through the bark to nourish the entire tree. Girdling cuts off interaction between the roots and the leaves, depriving parts of the tree of nutrients so that the tree or branch above the girdle will die.
- Cable lining uses a cable system to partially or fully suspend trees or materials from a site for purposes of removal.

In the Truckee River, Little Truckee River, and Lake Tahoe Hydrologic Units (HUs), only 13 pounds per square inch (psi) CTL equipment may operate within 100-year floodplains (as defined in Timber Waiver Attachment A) or Lake Tahoe SEZs without a Basin Plan prohibition exemption, provided the conditions of Timber Waiver Table N1 (in Attachment N) are met. Materials will be moved to the most appropriate landing by hand or by using low psi equipment.

Directional falling will be employed to keep felled trees out of ephemeral and perennial streams unless the channel reach is identified as deficient in large woody debris, in which case a Forest Service fisheries biologist shall select trees greater than 12-inch dbh to be felled directionally into the channel.

Once materials are moved into landings, materials will be processed through:

- Chipping, which is mechanically grinding materials (i.e., small-diameter trees, existing downed wood debris, limb wood, and brush) through a chipper machine to produce smaller pieces to be broadcast across portions of the site or removed from a project area;
- Mastication, which is mechanically grinding materials with a mastication head on-site to produce wood mulch that is left to spread throughout a project area; and
- Log hauling, which is the loading and removal of logs from a project site to a facility for further processing off-site that is typically conducted with a log truck.

Treated material not removed from the site will be lopped and scattered to a depth of 6 inches. This material will then be disposed of during broadcast burning. Excess materials will either be transported off-site in log form or as chip.

SEZ ratings, soil type, and existing conifer stand conditions were consulted for determining the appropriate treatment type (e.g., thinning of trees versus complete removal of tree groupings) for each unit. In general, conifers less than 30-inch dbh will be removed from within the meadow. Along the meadows edge, conifers will be removed to create a buffer to reduce future seed sources. Ultimately, the existing soil moisture conditions will predicate the appropriate ground operations employed for mechanical treatments.

The Timber Waiver defines saturated soil conditions to mean that site conditions are sufficiently wet that timber operations displace soils in yarding or mechanical site preparation areas or displace road and landing surface materials in amounts sufficient to cause a turbidity increase in drainage facilities that discharge into Class I, II, III, or IV waters (as defined in the Forest Practice Rules [FPRs]), or in downstream Class I, II, III, or IV waters that is visible or would violate applicable water quality requirements. Soils or road and landing surfaces that are hard frozen are excluded from this definition (Title 14 CCR Section 895.1).

In portions of the Project area that are considered operable as defined in Timber Waiver Attachment A, mechanical equipment operations will be accomplished through innovative technology that has been demonstrated to adequately protect soil and water resources. Examples include but are not limited to: CTL harvester and forwarding operations; low ground pressure tracked equipment; rubber-tired equipment; equipment that operates on a bed of slash; and over-snow equipment.

The Timber Waiver defines “operable,” as applied in Categories 2, 4, and 6, to mean that vehicles, tractors, and other equipment use off roads, under moist or wet conditions, must not create ruts exceeding 2 inches in depth and 25 feet in length. No ruts exceeding 3 inches in depth are allowed. Also included in the definition of operable, but not directly applicable to this Project—where project skid trails remain wet in isolated depressions that are less than 50 feet in length (i.e., no more than two such instances within 1,000 feet), woody debris, weed-free straw, or landing mats may be brought in to fill and/or span these depressions for operability. The enrollee must document this activity and provide Lahontan Water Board staff with a description and explanation of what was done within seven calendar days of implementing this solution. Where appropriate, water board staff may require material to be removed prior to project completion.

Mechanized equipment will operate over a slash mat to reduce soils impacts, with this material retained on-site to augment the fuel bed for broadcast burning. Mechanical removal treatments will be limited to trees with an upper diameter limit of 30-inch dbh. Select trees that are greater than 30-inch dbh may be girdled to produce future snag habitat. Existing snags within and along the edge of the meadow will be retained to protect habitat, unless they are deemed a hazard or removal is determined to be necessary to complete treatment actions. Within thinning treatment areas, conifers less than 30-inch dbh would be thinned from below to mimic historical stocking levels.

3.7.2 Over the Snow Mechanical Treatments

If operating mechanically is not suitable within portions of the Project area during normal operating periods or if future project funding dictates Project phasing, over the snow mechanical operations may be used to accomplish conifer removal during the winter period. Over the snow mechanical treatments will be used in areas that Timber Waiver Attachment A does not describe as suitable for mechanical treatment during a normal operating period and in areas rendered inoperable due to soil moisture conditions at the time of implementation.

Over-snow watercourse crossings may be constructed and would be removed at the conclusion of operations or before a rain event, if there is a risk of diversion or obstruction of the flow of water within the channel. Removal of such a watercourse crossings will be conducted without disturbing the watercourse bed or banks.

3.7.3 Hand Treatments/Hand Crew Operations

Hand crew operations refer to cutting vegetation with a chainsaw or hand saw and manually piling material on-site or removing material with the use of motorized equipment limited to existing roads (except chippers and/or brush mowers). This includes prescribed burning and the construction of fuel breaks.

Over the snow treatments and mechanical treatments will employ some hand treatments, if no other mechanical removal options exist. Hand-treated material will be lopped and scattered or removed by carrying, as needed, and then broadcast burning would follow to complete the treatments. Broadcast burning in the treatment unit will occur in the same season, as conditions allow.

Hand treatments will remove trees up to 30-inch dbh. Manageably-sized portions of felled live trees (e.g., branch wood and portions of boles smaller than 16 inches in diameter) will be lopped and scattered to provide a fuel bed for prescribed broadcast burning. Larger bole material will be left in place only if it is out of reach of the mechanical equipment.

3.8 Prescribed Broadcast Burning – Forest Service and Washoe Tribe Fire Crews

Prescribed fire means the implementation of a written prescription to burn a designated area under specified environmental conditions and may include broadcast burning or pile burning. Burn pile is defined in the Timber Waiver as hand and machine constructed piles of organic materials (e.g., slash, branches, limbs, stumps, biomass) intended for burning.

For optimal ecosystem response and long-term meadow vegetation management, broadcast burning will be applied immediately following mechanical and hand treatments. The immediacy for application of prescribed fire is driven by the predicted rise in the meadow water table, a known groundwater response that follows removal of conifers from meadow ecosystems.

No piling of cut material will occur under this Project. The Timber Waiver allows for pile burning within waterbody buffer zones (WBBZs) and SEZs if a project meets certain requirements; however, pile burning

could lead to spots of high-intensity fire in areas of the meadow, which would conflict with the Project objectives and purpose and need.

Prescribed fire in the form of broadcast burning will be used as a treatment to remove small conifers (<3-inches dbh) and enhance native riparian plant vigor and diversity. Broadcast burning means the use of fire to achieve ecological or fuel reduction benefits. Broadcast burning does not include burning of organic matter that is piled during mechanical site preparation or the ignition of "burn piles."

The anticipated fire intensity will be light to moderate with limited residence time. Broadcast burning prescriptions will avoid adverse effects to soil and water resources by applying prescribed fire at a fire intensity and duration that will not result in severely burned soils. Broadcast burning prescriptions will be applied such that flame heights will not exceed 2 feet within 75 feet of stream courses or on wetlands, unless higher intensities are required to achieve site-specific objectives. Additionally, fires would not be ignited using fire accelerant within the WBBZ for Meeks Creek (i.e., within 75 feet of the Class I and within 25 feet of the Class III) to avoid and minimize potential water quality impacts.

Existing roads and trails will be used as fire line to the extent feasible. When line construction is necessary it will be completed with hand tools, to the minimum width and depth necessary to hold the fire. Minimum Impact Suppression Techniques will be used. All line will be rehabilitated by pulling any berms created back into the line and creating water bars where necessary. Prior to construction of fire lines in meadow areas, consultation with a watershed specialist will occur to determine the appropriate construction and decommissioning techniques to avoid soil and water quality impacts.

3.9 Initial Traditional Ecological Knowledge Implementation – Washoe Tribe

The initial and long-term actions proposed in Sections 3.9 and 3.12 comply with Timber Waiver Category 2 criteria and conditions. The Washoe Tribe serves as the enrollee for authorization of initial and long-term implementation of TEK in the Meeks Meadow complex. The goals and objectives of TEK implementation complement the purpose and need for the Project, as discussed in the 2013 Decision Memorandum. However, the goals described in more detail in Section 2.5 incorporate cultural management practices as a means of complementing or substituting western restoration practices, while reaching the same desired outcome and include:

- Goal 1: Restore Meadow Function and Condition
- Goal 2: Demonstrate Efficacy of TEK and Tribal Land Management Collaboration and Ability
- Goal 3: Improve Tribal Connection to Aboriginal Lands and Meeks Meadow through Outreach and Educational Activities.

Cultural management of native landscapes includes a variety of methods and techniques, timing, and use of tools for manipulating the landscape. Cultural management of aboriginal lands by the Washoe people has influenced the size, structure, and species composition of aboriginal lands, including Meeks Meadow, for thousands of years prior to Euro-American arrival. Cultural management involves working in harmony with the existing landscapes and seasonal shifts, and use of harvesting and management techniques that ensure the continuation of the target species (Anderson 2005). Cultural management techniques to be employed in Meeks Meadow are discussed below, although the execution of various techniques will be dependent on outcomes of the timber removal and prescribed fire actions, and ongoing monitoring of the meadow.

3.9.1 Collection and Trimming

Collection, trimming, or pruning can be used for various purposes, such as the removal of materials for basket making, trimming of older/decedent vegetation to ensure new growth and shoots, collection of foods or medicines for consumption, or weeding around desirable plants to decrease competition. Collection and trimming generally includes the removal of some plant part, whether it is taken off-site for tribal consumption or use, or left on-site to decompose and return nutrients to the soil. Care is taken to avoid overharvesting, and collection areas are rotated as appropriate. Collection and trimming tools include human hands and hand-held tools.

3.9.2 Tilling and Digging

The purpose of tilling and digging is to aerate soils, improve water percolation, decrease soil compaction, and incorporate organic materials and nutrients into the soil profile. This can improve the soil conditions and below- and above-ground health of certain plants and promote tuber and rhizome propagation (Anderson 2005). Tilling and digging are conducted with hand tools and are typically conducted at small spatial scales within larger landscapes.

3.9.3 Planting

Cultural planting at Meeks Meadow would be limited to native, culturally significant plants, as listed in **Table 1**, and include planting of containerized stock, transplanting, and woody cuttings installation. Plantings can increase desirable plant densities and frequencies, increase genetic diversity, and create resilience to environmental changes such as climate change. Cultural planting may include the planting of containerized stock, as obtained by commercial native plant nurseries, or as propagated by the Washoe Tribe or other partners using native, local genetic material (seeds or woody cuttings). Plantings could also include wattle installation or pole planting of native, local woody vegetation cuttings. Plantings may also include the transplantation of native, local plant material, as taken from areas within the meadow, or other appropriate and landowner-approved locations within or near the Lake Tahoe Basin that can support minimal removal of the given species. Planting locations would be selected based on appropriate vegetation community, plant needs, and existing plant diversity. Planting techniques would typically include hand tools such as shovels and trowels, but may include gas-powered soil augers (for creating planting holes) or waterjet stingers (for creating holes for pole planting).

Table 1. Culturally Significant Plant Species

Scientific Name	Common Name
Achillea millefolium	Yarrow
Aconitum columbianum	Monkshood
Adenocaulon bicolor	Trail plant
Allium campanulatum	Onion
Allium validum	Swamp onion
Alnus tenuifolia	Mountain alder
Amelanchier spp.	Serviceberry (Utah Serviceberry)
Antennaria umbrinella	Rosy pussytoes
Aquilegia formosa	Western columbine
Arctostaphylos patula	Greenleaf manzanita
Balsamorhiza sagittata	Arrowleaf balsamroot

Table 1. Culturally Significant Plant Species

Scientific Name	Common Name
Calocedrus decurrens	Incense cedar
Calochortus spp.	Mariposa lily
Carex nebrascensis	Nebraska sedge
Carex rostrata	Beaked sedge
Castilleja mutis	Indian paintbrush
Cirsium andersonii	Anderson's thistle
Cornus sericea	Redosier dogwood
Epilobium angustifolium	Fireweed
Equisetum arvense	Field horsetail
Fragaria virginiana	Mountain strawberry
Gentiana calycosa	Rainer pleated gentian
Heracleum lanatum	Cows parsnip
Hieracium albiflorum	Whitehawk weed
Ipomopsis aggregate	Scarlet gilia
Iris spp.	Iris
Lilium parvum	Sierra tiger lily
Lupinus brewerii	Brewers lupine
Lupinus lepidus	Pacific lupine
Lupinus polyphyllus	Big leaf lupine
Madia bolanderi	Bolander's madia
Mentha arvensis	Field Mint
Penstemon newberryi	Mountainpride penstemon
Penstemon rydbergii	Rydberg's penstemon
Perideridia spp.	Yampa
Pinus lambertiana	Sugar pine
Platanthera leucostachys	Orchid white flowered bog
Polygonum polygaloides	Milkwart Knotweed
Prunus emarginata	Bitter cherry
Prunus virginiana	Choke cherry
Pteridium aqualinum	Bracken Fern
Pterospora andromedea	Woodland pinedrops
Quercus kelloggii	California black oak
Quercus vaccinifolia	Huckleberry oak

Table 1. Culturally Significant Plant Species

Scientific Name	Common Name
Ranunculus alismifolius	Alisma-leaved buttercup
Ribes cereum	Wax currant
Ribes nevadensis	Sierra currant
Ribes roezlii	Sierra gooseberry
Rosa woodsia	Wild rose
Rubus parviflorus	Thimbleberry
Salix eastwoodiae	Mountain willow
Salix lemmonii	Lemmon's willow
Salix lucida ssp. Lasiandra	Shining willow
Salix scouleriana	Scouler's willow
Sambucus spp.	Red elderberry as well as blue elderberry
Sarcodes sanguinea	Snow flower/plant
Senecio triangularis	Arrow leaf groundsel
Sidalcea glaucescens	Waxy checkermallow
Stellaria longipes	Meadow starwart
Symphyotrichum ascendens	Western aster
Thalictrum fendleri	Fendler's meadowrue
Tragopogon dubius	Yellow salsify
Trifolium longipes	Longstock clover
Veratrum californicum	California corn lily
Viola glabella	Pioneer violet
Viola lobata	Moosehorn violet

3.9.4 Seeding

Seed material used at Meeks Meadow would also be limited to native, culturally significant plants, as listed in **Table 1**. Seeding can be used to propagate desirable vegetation, particularly in areas that have been weeded, have limited vegetation growth, or immediately following prescribed or cultural burning. Utilized seed may be from commercial stock (certified weed-free) or from tribal or other partners' collations from within the meadow, or other appropriate and landowner-approved locations within or near the Lake Tahoe Basin. Seed collections would be limited to the collection of seed exclusively (without the removal of all seed on a single plant), rather than removal of seed heads or entire plant, to ensure both annual and perennial plants continue to survive and re-propagate in place. Seeding may be conducted by hand or with broadcast backpack seeders.

3.9.5 Non-Native and Invasive Species Management

The actions of non-native and invasive species management are similar to those of collection and trimming; however, they include the entire removal of the target plant either by digging, cutting, or pulling. If the

removed plant part has viable seeds, the entire plant will be removed from the site. Tools for non-native and invasive species management include human hands and hand-held tools. Target species to monitor and manage for include species on the most recent list of Forest Service Invasive Plants of Management Concern, and additionally any lodgepole pine seedlings within the meadow and riparian communities.

3.10 Site Stabilization and Demobilization

Landings, temporary roads, and staging areas will be rehabilitated post-implementation. Revegetation and rehabilitation will include spreading chip, subsoiling to a minimum depth of 12 inches, reseeding with culturally significant, native species, and spreading meadow mowing clippings as ground cover.

Road improvements will be needed for mechanical treatments on Forest Service Roads 14N42 and 14N44. These roads are currently in level 1 maintenance status (dormant). During Project implementation, the road maintenance level will change to level 2 and then be returned to level 1 when the Project is complete; this level is managed for fire suppression and resource management with locked gate control, and remains closed to general public vehicular access.

Disturbed sites where infestations of invasive plants are likely to become established will be revegetated. Revegetation with plants native to the area would occur at landings, staging areas, and other highly disturbed sites to reduce risk of invasion from non-native invasive species. Revegetation could include tilling, mulching, plantings, watering, and seeding with native shrubs, forbs, and grasses. Sites would be evaluated for revegetation needs based on future use of the site, extent of disturbance, accessibility, and similar parameters. Weed-free mulches and seed sources will be used. Topsoil from the Project area will be salvaged for use in on-site revegetation when possible, unless contaminated with invasive weeds. Persistent non-natives such as cultivated timothy (*Phleum pratense*), orchard grass (*Dactylis glomerata*), or ryegrass (*Lolium* spp.) will not be used. This requirement is consistent with the Forest Service Region 5 policy that directs the use of native plant material for revegetation and restoration for maintaining "the overall national goal of conserving the biodiversity, health, productivity, and sustainable use of forest, rangeland, and aquatic ecosystems."

Project completion will be posted to the LTBMU and Eldorado National Forest public websites, as well as the Pacific Crest Trail Association website, as soon as Project demobilization is completed.

3.11 Monitoring, Reporting, and Adaptive Management

The Project includes the following monitoring, reporting, and adaptive management requirements:

1. A long-term Cultural Management Plan has been developed to determine the approximate time between prescribed fire treatments and if additional hand treatment or riparian vegetation seeding is needed. If natural recruitment of aspen, cottonwood, and willow does not occur post-implementation, seeding and planting may be implemented. The frequency and timing of broadcast burning is expected to change over time, and post-implementation monitoring results will inform the long-term prescribed fire regime. This management plan is titled Cultural Management Plan and is included in **Appendix A.**
2. Implementation, effectiveness, and validation monitoring will be developed by the Forest Service Interdisciplinary Team to corroborate the goals and objectives of the Project. Monitoring results and conclusions are expected to inform the Washoe Tribe's cultural management planning and implementation actions for the Meeks Meadow complex long-term habitat restoration. Post-implementation monitoring will employ the analysis of vegetative trend plots and Brown's transects, or other equivalent monitoring protocols to determine the ecological effectiveness of conifer removal in montane meadows, as conducted by the Forest Service. Plots and transects will be established pre-implementation and monitored annually for three years post-implementation. Vegetative trend,

vegetation community, and cultural vegetation monitoring will be conducted by the Washoe Tribe as part of a long-term meadow monitoring and adaptive cultural management effort.

3. The following bulleted list of monitoring is to be carried forward as part of Project implementation.
   - Implementation monitoring in fuels treatment areas would include completing a checklist to determine if soil and water related BMPs and resource protection measures were implemented as described in the NEPA, CEQA, and contract documents. Implementation monitoring for select BMPs would occur prior to a large storm event (1 inch or greater forecasted). A watershed or transportation specialist would review project BMPs on the ground and notify contract administrator if additional BMPs are recommended on active units to disconnect runoff from surface water features.
   - The Forest Service botanist will be notified of Project activities that occur in known invasive plant sites. Known invasive weed infestations within the project area will be monitored following project implementation to ensure additional weed species do not become established in the areas affected by the project and to ensure that known weeds do not spread.
   - Revegetated sites as identified in project resource protection measures would be monitored for 3 years post-implementation to evaluate whether revegetation is successful or whether there is a need for further revegetation.
   - Brown's transects will be located in the five established vegetative trend transects to monitor fuel loading effects on vegetation. Transects will be monitored pre- and post-broadcast burn implementation.
4. Pursuant to California Water Code Section 13267, implementation monitoring, as described in the Category 6 Fall Implementation Monitoring Form (Timber Waiver Attachment G), must be completed before November 15 of every year for the duration of activities. Monitoring information must be submitted to the Lahontan Water Board by January 15 of the following year.
5. Pursuant to California Water Code Section 13267, if tractor, vehicle, or equipment operations occur in the winter period (as defined in Timber Waiver Attachment A), the enrollee must comply with the Category 6 Daily Winter-Period Monitoring Program (Timber Waiver Attachment E) and conduct winter implementation monitoring (Timber Waiver Attachment H). Daily winter period monitoring is required on days of equipment operations between October 15 and May 1. Data accumulated during this monitoring must be retained by the enrollee and submitted by July 15 of every year. Winter implementation monitoring is required when timber harvest and vegetation management activities occur after October 15 and before May 1.
6. For Category 6 projects, forensic monitoring utilizing Timber Waiver Attachment I, Forensic Monitoring Form, may be required and may occur at any time of the year after a significant rain or snowmelt event. Forensic monitoring is required if one or more of the eight conditions listed on page 5 of Attachment K exist within the activity area.
7. Effectiveness monitoring (Timber Waiver Attachment J) should be conducted at, or near, the end of the spring runoff, preferably between March 15 and June 15. Effectiveness monitoring is required if one or more of the eight conditions listed on page 5 of Timber Waiver Attachment K exist within the activity area.
8. Upon completion of timber harvest or vegetation management activities, enrollees must submit a Timber Waiver Attachment G and request termination of coverage under the Timber Waiver in accordance with Attachment M, Notice of Activity Completion Form. The enrollee and the activities remain subject to all applicable Timber Waiver criteria and conditions (including required monitoring and reporting) until a notice is received from Lahontan Water Board staff terminating coverage under the Timber Waiver. Prior to approving (or declining) termination, Water Board staff may inspect the project area.

3.12 Long-term Traditional Ecological Knowledge Implementation – Washoe Tribe

The Cultural Management Plan aligns with the Purpose and Need statement of the Decision Memorandum for implementation of the Project (LTBMU 2013), while adding a vital cultural component. Maintaining and enhancing the Washoe Tribal legacy at Lake Tahoe is an important step in collectively planning for future environmental and climate change resiliency. The Washoe Tribe has thousands of years of history and effective stewardship experience relating to resource allocation and environmental management within the Lake Tahoe Basin. The planning and future restoration efforts will allow for the expansion and improvement of quality natural areas on aboriginal lands, allowing Tribal Elders to share TEK of cultural plants and environmental practices with the youth and other tribal members. The implementation of this Project and subsequent cultural management will demonstrate the efficacy of TEK in the restoration and management of ecosystems and continue to build tribal participation in this management.

The primary goal of the Project is to restore the meadow from conifer encroachment. The objectives of the Project are to establish long-term management of Meeks Meadow by the Washoe Tribe and to implement an active vegetation management and maintenance plan that is based on TEK; it is the Washoe Tribe's and Forest Service's objective to implement the Project while creating no significant adverse impact on the environment. Long-term cultural management and use of TEK at Meeks Meadow will include the cultural management methods mentioned above and also includes cultural burning.

3.12.1 Cultural Burning

The practice of cultural burning is similar in purpose and outcome as prescribed broadcast burning. Cultural burning has been practiced in the Lake Tahoe Basin by Washoe people for thousands of years prior to Euro-American arrival, and is a means of maintaining the open character of meadows and controlling meadow invasion by conifers. Cultural broadcast burning promotes new growth of basket-making materials, limits growth of brush and conifer invasion and maintains open characteristic of meadows, implements fuels management, triggers seedbank growth, and improves soil nutrients and fertility. Cultural burning is historically conducted in the late fall, prior to snowfall, to achieve maximum benefits to woody riparian species and prevent unnecessary vegetative harm.

3.13 Project Phasing, Schedule, and Equipment

The Project is scheduled to commence in 2019; the start date will be dictated by hydrologic and soil conditions in Meeks Meadow and along Forest Service access roads. Ideally, conifer thinning and removal will occur in one season and in a single entry, with broadcast burning and initial cultural management actions following in the fall of 2019. Long-term cultural management will occur seasonally and as determined through post-implementation monitoring results and TEK.

Should anticipated funding fall short of total Project costs, or should saturated soil conditions (per Timber Waiver Attachment A) persist throughout the operation season, Project implementation can be phased as follows to respond to financial and environmental conditions over the next 4 to 5 years.

Category 6 Phase 1:

- Pre-Project surveys;
- Mobilization, site preparation, and public safety;
- Conifer thinning by mechanical treatment in upland soil areas, and establishment of landings in these areas (**Figure 2**);

- Conifer thinning and removal by hand treatment in areas with soil conditions that are inoperable for mechanical treatment;
- Site stabilization and winterization; and
- Overwintering monitoring and reporting per Timber Waiver Category 6 conditions (Timber Waiver Attachment H).

Category 6 Phase 2:

- Pre-Project surveys;
- Mobilization and public safety;
- Conifer removal (implemented over the snow and/or as operable soil conditions allow) by mechanical treatment;
- Conifer removal by hand treatment in area of inoperable soil conditions;
- Prescribed broadcast burning;
- Site stabilization and demobilization;
- Post-implementation monitoring and reporting per Category 6 conditions (Timber Waiver Attachments G and J); and
- Termination of coverage per Timber Waiver Attachment M.

Category 2:

- Initial TEK implementation (concurrent with Category 6 Phase 2); and
- Long-term TEK implementation per Category 2 conditions.

Equipment that is anticipated for Project implementation includes:

- Chainsaws;
- Harvester;
- Forwarder;
- Masticator;
- Chipper;
- Cable yarder;
- Water truck;
- Drip torches;
- Log truck; and
- Worker trucks.

3.14 Timber Waiver General Conditions

To be enrolled under the 2014 Timber Waiver (Board Order No. R6T-2014-0030), an enrollee must meet applicable eligibility criteria and requirements for the category of activities covered by the waiver, including applicable general conditions, as set forth below:

(1) Activities must be conducted in compliance with the Basin Plan, and other applicable laws, regulations, and plans.

(2) Wastes, including but not limited to, petroleum products, soil, silt, sand, clay, rock, felled trees, slash, sawdust, bark, ash, pesticides, must not be discharged to surface waters or be deposited in locations where such material may discharge to surface waters. If discharge of wastes to surface waters occurs (not previously authorized by the Lahontan Water Board), the enrollee must notify the Lahontan Water Board by telephone or email within 24 hours of detection of the discharge or the next business day, whichever comes first.

(3) ***Condition for activities within the Little Truckee River, Truckee River, or Lake Tahoe HUs only:*** *If timber harvest and vegetation management activities are planned within 100-year floodplains of the Little Truckee River, Truckee River, or Lake Tahoe HUs, SEZs, or high erosion hazard lands (Bailey Land Classification 1a, 1c, or 2) of the Lake Tahoe HU, waste discharge prohibitions may apply. The Water Board grants a conditional Basin Plan Prohibition Exemption in certain cases as described in Attachment N, for slash piling and burning in Lake Tahoe HU SEZs that is conducted under Waiver Category 6, and in accordance with the requirements of Attachment Q. Review Attachments N and Q to verify if any proposed activities would need a Basin Plan prohibition exemption prior to proceeding.*

(4) Activities conducted under the Timber Waiver must comply with the category specific eligibility criteria and conditions, including monitoring and reporting requirements where specified. The enrollee must conduct activities in accordance with information submitted in the application for waiver coverage, if one is required. For Categories 4, 5, and 6, the enrollee must conduct monitoring and reporting pursuant to Water Code section 13267 unless alternate monitoring and reporting requirements have been approved by the Executive Officer.

(5) Timber harvest and vegetation management activities must be conducted in accordance with any design features, management actions, mitigation measures, and monitoring plans developed as part of complying with CEQA, NEPA, the FPRs, and/or TRPA environmental analysis requirements.

(6) Timber harvest and vegetation management activities subject to this Timber Waiver must not create a pollution, contamination, or nuisance, as defined by Water Code section 13050, subdivisions (k), (l), and (m).

(7) All equipment used must be monitored for leaks, and removed from service if necessary to protect water quality. All spills must be immediately contained and spilled materials and/or contaminated soils must be properly disposed. An emergency spill kit adequate to contain spills that could result from onsite equipment must be at the project site at all times of equipment use.

(8) This Timber Waiver does not permit any illegal activity, and does not preclude the need for permits or licenses that may be required by other governmental agencies, or other approvals by the Water Board such as discharges subject to a National Pollutant Discharge Elimination System (NPDES) permit under the Clean Water Act, including silvicultural point sources as defined in 40 Code of Federal Regulations, section 122.27. This waiver is not a substitute for state Water Quality Certification(WQC) under section 401 of the federal Clean Water Act which is required if a federal

permit, such as a Clean Water Act section 404 permit, is required. Also, persons practicing forestry must ensure that they maintain appropriate licenses and certifications pursuant to Public Resources Code sections 752 and 753.

(9) Pursuant to Water Code section 13267 subdivision (b) and Water Code section 13269 subdivision (a), any proposed material change to the activities proceeding under the Timber Waiver must be reported to Water Board staff in advance of implementation of any such change. Material changes include, but are not limited to:

(a) Change of project location or increase in size;

(b) The addition of winter period operations;

(c) Relocation or addition of watercourse crossings; or

(d) Addition or relocation of roads or skid trails into a WBBZ.

(10) Any proposed material change to a project that does not result in a change in qualification under this waiver to a higher Category (e.g., Category 4 to Category 4) must be reported to the Water Board prior to implementation. Material changes to Category 6 projects shall not proceed until Category 6, Condition 1 is satisfied. Any proposed material change to a project that results in a change in qualification under this waiver to a higher category (e.g., Category 2 to 4, or Category 4 to 6) must follow the notification requirements as if it was a new application.

(11) A report of waste discharge must be filed with the Water Board pursuant to Water Code section 13260 for any proposed material change to the activities proceeding under the Timber Waiver that would result in ineligibility for Timber Waiver coverage.

(12) For the purpose of performing inspections and conducting monitoring, Water Board staff must be allowed reasonable access onto property where timber harvest and vegetation management activities are proposed, are being conducted, or have been terminated or completed. Inspections and monitoring may include sample collection, measuring, and photographing/taping to determine compliance with waiver conditions and eligibility criteria. Such inspections and monitoring are consistent with Water Code section 13267, subdivision (c), PRC section 4604, subdivision (b)(1), and other applicable laws.

Prior to, or immediately upon entering the property, Water Board staff will attempt to contact the site owner, persons performing the timber harvest and vegetation management activities, or other on-site representative(s) in order to inform the landowner or persons onsite of each inspection, and to discuss any safety considerations. If consent to access to property is unreasonably withheld, the Executive Officer may terminate the applicability of the Timber Waiver.

(13) ***Condition for Categories 4, 5, or 6:*** *For the purpose of observing, inspecting, photographing, digitally recording or videotaping, measuring, and/or collecting samples or other monitoring information to document compliance or non-compliance with the eligibility criteria, conditions, or provisions of this Timber Waiver, enrollees agree to allow Water Board staff:*

(a) Entry at any time, with or without advance notice, onto: (1) the real property where timber harvest and vegetation management activities covered under this Timber Waiver are proposed, are being conducted, or have concluded; and (2) any and all outdoor areas in the control or ownership of the enrollee, in the vicinity of and downstream of timber harvest and vegetation management activities; and

(b) Access to and permission to copy any record required to be kept under the conditions of this Timber Waiver, including, but not limited to, any self-monitoring records and/or equipment used to fulfill monitoring requirements.

3.15 Category 6 Conditions

To be enrolled under the Timber Waiver, an enrollee must meet the applicable general conditions that are stated in Section 3.15 above and also the category-specific eligibility criteria and conditions set forth in the Waiver. The Project meets the eligibility criteria for Category 6 (*Activities that do not qualify for Categories 1 – 5, and may include burning or equipment operations within Waterbody Buffer Zones, 100-year Floodplains, or Stream Environment Zones.)* and will comply with the category-specific conditions, as applicable, in order to enroll and proceed under this category. The conditions are as follows:

Enrollees conducting activities meeting the eligibility criteria listed above must comply with the following conditions in order to proceed under this Timber Waiver category:

*(1) Submit a complete Category 6 Application Form (timber Waiver Attachment K). Activities may begin once Water Board staff has notified the enrollee that their application is complete, or **30 days** following receipt of an application by Water Board staff as determined by a notice of receipt from Water Board staff, or by confirmation of delivery by the United States Postal Service or other private carrier.*

(2) An RPF, Federal Forestry Professional (as defined in Attachment A), or Natural Resource Professional has clearly indicated (within certified environmental documents completed in compliance with CEQA and/or NEPA, or within the Timber Waiver Application submitted to the Water Board) whether proposed activities could occur within or affect the following:

(a) Known landslides or unstable areas;

(b) Areas of high or extreme erosion hazard rating;

(c) Overflow channels, flood prone areas, and riparian areas; or

(d) Aquatic or wetland habitat

(3) An RPF, Federal Forestry Professional, or Natural Resource Professional has clearly indicated (within certified CEQA and/or NEPA document(s), or within the Timber Waiver Application) whether the following conditions are present within the project area:

(a) Overflow channels resulting from the obstruction of stream flow or stream diversions;

(b) Culverts showing evidence of inadequate flow capacity; or

(c) Migrating channels or erodible watercourse banks.

(4) An RPF, Federal Forestry Professional, or Natural Resource Professional has clearly indicated (within certified CEQA and/or NEPA document(s), or within the Timber Waiver Application) whether the following activities are included within the proposed project:

(a) Skid trails on slopes greater than 50% (greater than 30% in Lake Tahoe HU);

(b) Construction of new watercourse crossings and/or modification of existing watercourse crossings;

(c) Landings and skid trails (including existing landings and skid trails and/or those to be constructed or reconstructed) proposed for use during timber harvest and vegetation management activities for which any portion of the landing or skid trail lies within a WBBZ (as defined in Attachment B);

(d) Equipment operations within WBBZs or Lake Tahoe HU SEZs (as defined in Attachment A) or Lake Tahoe, Truckee River, or Little Truckee River HU 100- year floodplains (as defined in Attachment A);

(e) Prescribed fire within WBBZs, Lake Tahoe HU SEZs, or Lake Tahoe, Truckee River, or Little Truckee River HUs 100-year floodplains; or

(f) New roads within the Tahoe HU.

(5) If any of the activities or conditions listed above (in Conditions 2 through 4) exist or are proposed, the enrollee must, in the application, NEPA, and/or CEQA document, explain and justify the proposal and provide project modifications and/or mitigation measures to avoid any adverse impact(s) to water quality. If details and mitigation measures are referenced in supporting documentation (NEPA, 401 WQC, etc.), that document must be attached or provided electronically, and the specific location of the referenced details must be noted. The project must be conducted in accordance with environmental documents and the waiver application (including implementation of design features and mitigation measures). Within the Lake Tahoe, Little Truckee River, and Truckee River HUs, Basin Plan prohibitions may apply (see Timber Waiver Attachment N). If an exemption is required, the enrollee must request an exemption and provide additional information in the Plan or as an addendum to the Waiver application to address the required Basin Plan findings and criteria including additional project specific monitoring to evaluate effects. The enrollee may also include project trigger(s) (as defined in Attachment A) or thresholds where activities will stop if the trigger(s) are reached. The enrollee will propose the appropriate and quantifiable triggers. However, if the enrollee does not propose trigger(s), or fails to propose trigger(s) adequate to prevent discharge, Water Board staff will work with the enrollee to develop appropriate trigger(s). The Executive Officer must grant an exemption before activities subject to the prohibitions may occur.

*(6) Pursuant to Water Code section 13267, comply with the **Monitoring and Reporting Program** described in the Category 6 Application Form (Timber Waiver Attachment K) or as directed by the Executive Officer. If a BAER report or similar is prepared, this must be submitted to Water Board staff upon request.*

*(7) Pursuant to Water Code section 13267, if tractor, vehicle, or equipment operations occur in the winter period (as defined in Timber Waiver Attachment A), the enrollee must comply with the Category 6 **Daily Winter-Period Monitoring Program** (Timber Waiver Attachment E). Data accumulated during this monitoring must be retained by the enrollee and submitted July 15 of every year.*

(8) Over-snow watercourse crossings may be constructed as long as they are removed at the conclusion of operations or before a rain event if there is a risk of diversion or obstruction of the natural flow of water within the channel. Removal of such watercourse crossings must be done without disturbing watercourse bed or banks.

(9) Tractor, vehicle, or equipment operations on existing roads, or off roads outside WBBZs, must be limited to:

(a) When soils are not saturated (as defined in Timber Waiver Attachment A); or

(b) When hard-frozen soil conditions exist (as defined in Attachment A); or

(c) When snow depth is sufficient to not allow visible disturbance of soils.

(10) Off existing roads within WBBZs, tractor, vehicle, or equipment operations can occur under Conditions 4(d) and 5, above, when (a), (b), or (c) below applies:

(a) When soils are operable (as defined in Attachment A); or

(b) When hard-frozen soil conditions exist; or

(c) When snow depth is sufficient to not allow visible disturbance of soils.

(11) Within SEZs in the Lake Tahoe HU and 100-year floodplains of the Lake Tahoe, Truckee River, and Little Truckee River HUs, only CTL equipment with ground pressures less than or equal to 13 psi may be used without need for a Basin Plan prohibition exemption provided the conditions of Table N1 (in Timber Waiver Attachment N) are met.

(12) If operating within the sensitive areas described under Condition 11, above, CTL equipment must travel only over areas that have been scattered with sufficient limbs and tree tops to prevent rutting or compaction of underlying soils and minimize damage to native SEZ vegetation. The CTL Forwarder, or other low ground pressure method, shall remove this slash bed when backing out of a completed unit; sufficient slash shall be left to provide adequate ground cover (as defined in Timber Wavier Attachment A).

(13) In areas where sufficient slash is unavailable to adequately control erosion, the applicant shall identify and approximately map these areas, and detail equally protective mitigation measures in the Timber Waiver application and apply for a Basin Plan prohibition exemption. In developing alternative mitigation measures to driving on a bed of slash where sufficient slash is not available, the applicant shall, at a minimum, create waterbreaks on these CTL equipment trails in accordance with the 2013 California FPRs, CCR, title 14, section 914.6. Waterbreaks or more protective mitigation measures shall be either created by hand work or using the CTL equipment as it is backing out of the unit.

(14) Within 100-year floodplains of Lake Tahoe, Truckee River, and Little Truckee River HUs, and Lake Tahoe HU SEZs, other equipment may be used provided the Executive Officer has granted an exemption to the Basin Plan Prohibition (see Timber Wavier Attachment N).

(15) All areas disturbed by timber harvest and vegetation management activities must be stabilized at the conclusion of operations or before the winter period, whichever is sooner.

(16) Slash, chipped, and masticated material must not be discharged to waterbodies, or be deposited in locations where such material may discharge to a waterbody. Within WBBZs, compressed slash, chipped, and masticated material must not exceed an average of two inches in depth, with a maximum depth of four inches.

(17) Facilities that cross Class I watercourses that support fish must be installed and maintained so as to allow for unrestricted passage of fish during all life stages.

(18) Culverts at watercourse crossings in which water is flowing at the time of installation shall be installed using methods to temporarily isolate or divert stream flows from the installation area.

(19) Permanent watercourse crossings and approaches shall be installed and maintained to accommodate 100-year flood flows and associated debris.

(20) Prior to the commencement of timber harvest and vegetation management activities within WBBZs, trees with a DBH greater than three inches planned for removal, or trees designated for retention, must be marked (including a base mark below the cutline) or designated by written prescription and/or sample mark. However, all trees greater than 14-inch DBH planned for removal within WBBZs must be marked (including a base mark below the cutline). Marking or written prescription must be done by either a(n):

(a) RPF or an individual under the direct supervision of a RPF;

(b) Federal Forestry Professional or an individual under the direct supervision of a Federal Forestry Professional; or

(c) Natural Resource Professional or an individual under the direct supervision of a Natural Resource Professional.

(21) Vegetation, other than target species (as defined in Timber Waiver Attachment A), that is found along waterbodies, or within or bordering meadows and wet areas, must be retained and protected during timber harvest and vegetation management activities.

(22) The following conditions apply to prescribed fire within 100-year floodplains, WBBZs, or SEZs):

(a) Slash piles must not be located within the 100-year floodplain of any watercourse or within 25 feet of a watercourse;

(b) Piling and burning of slash within SEZs and WBBZs may be conducted provided the requirements of Attachment Q are adhered to. Enrollees proposing SEZ pile burning activities that don't meet the requirements in Attachment Q must apply for a Basin Plan prohibition exemption under this Timber Waiver category;

(c) Authorization for piling and burning slash not meeting the conditions in (a) or (b) above will be considered by the Executive Officer following Water Board staff review of burn plan(s) or supplemental information submitted with the Timber Waiver Category 6 Application that includes site specific information such as, but not limited to:

i. Soil type(s);

ii. Vegetative cover;

iii. Minimum distances from waterbodies;

iv. Topography;

v. Percent of area to be burned within the WBBZ and/or SEZ;

vi. Explanation why burn piles within the WBBZ and/or SEZ is proposed; and

vii. Monitoring and mitigation measures or project design features to be implemented to ensure no significant adverse environmental effects will occur.

(d) Broadcast burning (as defined in Timber Waiver Attachment A) is allowed as long as the prescription does not include active ignition within SEZs or WBBZs;

(e) These activities will be subject to additional monitoring and reporting requirements pursuant to Water Code section 13267 (e.g., vegetative recovery, invasive species, evidence of erosion or transport of ash);

(f) Areas burned within WBBZs must be left in a condition such that ash, soils, and/or debris will not discharge to a waterbody; and

(g) If fuel breaks are constructed, effective waterbreaks must be constructed at the end of burning operations or prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.

*(23) Pursuant to Water Code section 13267, notify the Water Board in writing at least **30 days prior** to the proposed application of pesticides (as defined in Timber Waiver Attachment A), except for application of borax and/or sporax directly to tree stumps. The written notice must include the following:*

(a) Type of pesticide;

(b) Method and area of application;

(c) Projected date of application; and

(d) Measures that will be employed to assure compliance with the Basin Plan.

Subsequent changes to the proposal must be submitted in writing at least 14 days before the application, unless Water Board staff agrees in writing to a shorter notice period.

(24) Pursuant to Water Code sections 13267, upon completion of activities enrollees must request termination of coverage under the Timber Waiver in accordance with Timber Waiver Attachment M, Notice of Activity Completion Form.

(25) The project and the enrollee remain subject to all applicable Timber Waiver criteria and conditions (including required monitoring and reporting) until a Notice is received from Water Board staff terminating coverage under the Timber Waiver. Prior to approving (or declining) termination, Water Board staff may inspect the project area.

(26) Activities conducted under Category 6 must comply with the General Conditions of this Timber Waiver, as set forth in Section C, above, and meet the category-specific eligibility criteria listed above.

3.16 Category 2 Conditions

To be enrolled under the Timber Waiver, an enrollee must meet the applicable general conditions that are stated in Section 3.14 above and also the category-specific eligibility criteria and conditions set forth in the Waiver. The long-term implementation of TEK by the Washoe Tribe meets the eligibility criteria for Category 2 (*Activities conducted by hand crews, as defined in Timber Waiver Attachment A, including thinning operations and prescribed fire*) and will comply with the eight conditions for Category 2 projects.

Enrollees conducting activities meeting the eligibility criteria listed above are not required to notify, apply, or report monitoring to the Water Board if they comply with the following conditions:

(1) On existing roads, tractors, vehicles, low-ground-pressure chippers or other equipment shall not be operated during saturated soil conditions (as defined in Timber Waiver Attachment A).

(2) Operation of ATVs, chippers, brush mowers, or similar equipment off roads must always occur at distances greater than 25 feet from a waterbody and when at least one of the following conditions occurs:

(a) Soils are operable (as defined in Timber Waiver Attachment A); or

(b) Hard-frozen soil conditions (as defined in Timber Waiver Attachment A) exist; or

(c) Snow depth is sufficient to not allow visible disturbance of soils.

(3) Prior to the commencement of activities within WBBZs (as defined in Timber Waiver Attachment B), trees with a diameter-at-breast-height (DBH, as defined in Timber Waiver Attachment A) greater than three inches planned for removal, or trees designated for retention, must be marked (including a base mark below the cutline) or designated by written prescription and/or sample mark. However, all trees with a DBH greater than 14 inches planned for removal within WBBZs must be marked (including a base mark below the cutline). Marking or written prescription must be done by either a(n):

(a) RPF or an individual under the direct supervision of a RPF;

(b) Federal Forestry Professional (as defined in Timber Waiver Attachment A) or an individual under the direct supervision of a Federal Forestry Professional; or

(c) Natural Resource Professional or an individual under the direct supervision of a Natural Resource Professional.

(4) Activities must not cause or create erosion, destabilization of stream banks, temperature increases in waterbodies, disturbance to non-target WBBZ vegetation, or concentrated surface runoff.

(5) All areas disturbed by timber harvest and vegetation management activities must be stabilized at the conclusion of operations or before the winter period (as defined in Timber Waiver Attachment A), whichever is sooner.

(6) Chipped and masticated material must not be discharged to waterbodies, or be deposited in locations where such material may discharge to a waterbody. Within WBBZs chipped and masticated material must not exceed an average of two inches in depth, with a maximum depth of four inches.

(7) The following conditions apply to prescribed fire:

(a) Areas burned within WBBZs must be left in a condition such that waste, including ash, soils, and/or debris, will not discharge to a waterbody.

(b) If fuel breaks are constructed, effective waterbreaks must be constructed at the end of burning operations or prior to sunset if the National Weather Service Forecast is a "chance" (30% or more) of rain within the next 24 hours.

(c) Broadcast burning (as defined in Timber Waiver Attachment A) is allowed as long as the prescription does not include active ignition within WBBZs

(d) Burn piles may be placed within WBBZs under all of the following circumstances:

i. Piles must not be located within 100-year floodplain (as defined in Timber Waiver Attachment A) of any watercourse.

ii. Piles must be located a minimum of 25 feet from any waterbody.

iii. Piles must be limited in size to no more than 10 feet in diameter;

iv. No more than 10% of a treatment acre within the WBBZ shall be covered in piles; and

v. No placement or burning of piles within SEZs (as defined in Timber Waiver Attachment A) in the Lake Tahoe HU.

(Note: Prescribed fire within WBBZs that do not meet the above conditions may be authorized pursuant to an activity-specific notification under Category 6. See General Provision 2, in Section B, above.)

(8) All activities conducted under Category 2 must comply with the General Conditions of this Timber Waiver and meet the category-specific eligibility criteria listed above

3.17 Project-Specific Resource Protection Measures

The following RPMs are brought forward from the 2013 Decision Memo and have been modified, as needed, to comply with the 2014 Timber Waiver requirements to avoid, reduce, and minimize environmental impacts to less than significant during Project implementation.

RPMs are elements of a proposed project and project design that are applied in treatment areas. These measures were developed to reduce or avoid negative environmental effects of the proposed action on forest resources and are referenced to the Forest Service 2013 Decision Memo for the Project. The following RPMs have been included as part of the 2014 Timber Waiver application and when necessary have been modified to comply with Category 6 requirements to avoid and minimize potential environmental impacts to a level of less than significant during Project implementation.

The *Region 5 Water Quality Management Handbook* (Forest Service 2011) lists the applicable soil and water BMPs. Normal operating period is generally considered to be from May 1 through October 15 each year. However, operable conditions may be present outside of that time period, and inoperable conditions may be present within that period. Forest Service RPMs can apply to treatment activities within and outside of the normal operating period and may apply to one or more of the following conditions: dry soils, wet soils, frozen soils, or snow-covered soils. For purposes of this Project, operable soil conditions are defined as stated in Attachment A of the 2014 Timber Waiver. WBBZs are the following:

Class I Waterbody

Slope of Land Adjacent to Watercourse or Lake	Buffer Zone Width
< 30%	75 feet
30 – 50 %	100 feet
> 50 %	150 feet

Class II Waterbody

Slope of Land Adjacent to Watercourse or Lake	Buffer Zone Width
< 30%	50 feet
30 – 50 %	75 feet
> 50 %	100 feet

Class III Waterbody

Slope of Land Adjacent to Watercourse or Lake	Buffer Zone Width
< 30%	25 feet
≥ 30 %	50 feet

Class IV Waterbody

Slope of Land Adjacent to Watercourse or Lake	Buffer Zone Width
< 30%	25 feet
≥ 30 %	50 feet

3.17.1 All Project Phases

1. A watershed or transportation specialist will review Project BMPs prior to a large storm event (1 inch or greater) that may exceed BMP capacity and will notify the contract administrator if additional BMPs are recommended to disconnect runoff from surface water features. If water drafting occurs, water levels would be maintained to support aquatic dependent species and associated habitat, and to provide adequate outflow for downstream water uses. The contract administrator and/or watershed specialist will periodically check to ensure appropriate drafting procedures are being followed. If visual monitoring indicates water level and outflows are not adequate, the contract administrator would consult with a hydrologist and/or aquatic biologist and determine when to cease drafting water. This applies Project-wide.
2. To minimize soil compaction, gullying, and rutting, ground-based equipment operations would be conducted only during operable soil conditions as defined in Timber Waiver Attachment A. Operable means vehicles, tractors, and other equipment use off roads, under moist or wet conditions, must not create ruts exceeding 2 inches in depth and 25 feet in length. No ruts exceeding 3 inches in depth are allowed. Where Project skid trails remain wet in isolated depressions that are less than 50 feet in length (i.e., no more than two such instances within 1,000 feet), woody debris, weed-free straw, or landing mats may be brought in to fill and/or span these depressions for operability. The enrollee must document this activity and provide Lahontan Water Board staff with a description and explanation of what was done within seven calendar days of implementing this solution. Where appropriate, water board staff may require material to be removed prior to Project completion.

3. Special aquatic features (e.g., springs, seeps) would be flagged and equipment use in and adjacent to them would be avoided; Timber Waiver WBBZS of 25, 50, and 75 feet (i.e., Class III, II, and I waterbodies with an adjacent land slope of less than 30 percent, respectively) and hand treatments would be applied. Low psi equipment may be used during periods of operable soil conditions.
4. Any temporary bypass trails that are needed to maintain Desolation Wilderness trailhead access would be restored to a condition that resembles the surrounding area. This may include the decompaction of the trail tread surface, the scattering of tree limbs and branches, mulching, and placement of natural barriers to discourage use following restoration.

3.17.2 Vegetation Treatments in SEZs (during and outside normal operating period)

5. Per Timber Waiver Finding 9, only low-pressure equipment will operate in SEZs.
6. Temporary crossings for forwarder trails on Class III waterbodies would be constructed and removed when the channels are dry, to the extent feasible, or under appropriate over-snow conditions. If the channel is wet or flowing at the time that access is needed across a channel (i.e., during installation or for crossing removal), diversion and dewatering BMPs would be implemented prior to crossing installation and removal. Crossings would be removed before the winter season begins.
7. Saturated or ponded soil areas will be avoided in accordance with Timber Waiver limitations for "saturated soil conditions." Mechanical work in SEZs would be limited to times when soils are operable as defined in Attachment A of the 2014 Timber Waiver. During the winter period (October 15 to May 1), work in SEZs will be conducted according to RPM # 31-33 (Vegetation Treatments in Uplands and SEZ during the Winter Period or in Wet Conditions) and in accordance with Attachment A of the 2014 Timber Waiver.
8. Mechanical equipment operations in SEZs would be limited to CTL operations or operations using equipment that has low ground pressure such as rubber-tired equipment, equipment that operates on a bed of slash, or other innovative technologies that adequately protect soil and water resources. The SEZ risk rating system would be used to determine operability in all of the SEZ areas, and mechanical work in SEZs would be limited to times when soils are operable as defined in Attachment A of the 2014 Timber Waiver.
9. For mechanical operations that do not utilize low ground pressure equipment, a minimum 75-foot, 50-foot, and 25-foot equipment exclusion buffer would be used adjacent to Class I, II, and III waterbodies with an adjacent land slope of less than 30 percent, respectively. A larger, more restrictive WWBZ may be prescribed in certain areas based on the SEZ rating outcomes.
10. Tree removal using low-pressure CTL equipment in WBBZs is allowable under the Timber Waiver. The waiver prohibits tree removal methods that do not minimize disturbance of the ground surface within 75 feet (when the adjacent land slope is less than 30 percent) of Class I waterbodies and 25 feet (when the adjacent land slope is less than 30 percent) of Class III waterbodies.
11. Where implementation monitoring finds potential for sediment delivery, disturbed soil would be stabilized per the Timber Waiver requirements.

3.17.3 Vegetation Removal and Thinning Treatments (outside of normal operating period or wet conditions)

12. When working outside of the normal operating period (i.e., during the winter period of October 15 to May 1) conditions must be adequate to prevent erosion, sediment delivery to waterbodies, and soil compaction that would impact soil productivity or soil hydrologic function. Equipment operations would take place on portions of the treatment unit where adequate snow or frozen ground conditions

are present and in accordance with operable soil conditions, as defined in Attachment A of the 2014 Timber Waiver. The following criteria will be applied in determining equipment operations:

a. Frozen soil operations are permitted where operated vehicles, tractors and equipment can travel without sinking into soil or landing surfaces to a depth of more than 2 inches for a distance of more than 25 feet. Temperatures must also remain low enough to preclude thawing of the soil surface. (2014 Timber Waiver)

b. For over-snow operations, maintain approximately 12 inches of compacted snow/ice on undisturbed ground, and 6 inches of compacted snow/ice on existing disturbed surfaces. (Forest Service RPM)

c. For over-the-snow and frozen soil operations, exclude ground based equipment from the 25 foot buffer around perennial and intermittent channels. (Forest Service RPM)

d. When adequate snow or frozen soil conditions are not present, temporary crossings on intermittent or ephemeral channels (i.e., Class II and Class III waterbodies) may be approved on a case by case basis through agreement between the Contract Administrator and watershed specialist. These crossings shall not result in bank damage, water quality impairment, or obstructed flows. (Forest Service RPM)

3.17.4 Landings

13. Landings will be located outside SEZs. Fuel storage and refueling would be prohibited in SEZs. Procedures and spill prevention control measures for hazardous materials of any amount are included in Project contract clauses.
14. Hazardous materials, including diesel fuels and gasoline, will be transported, stored, and handled outside of SEZs. Spill Prevention, Containment, and Countermeasures Plans will be prepared, if the quantities used require them.
15. Proper drainage from landings will be provided during use; ditching, sloping, and water bars or other BMPs may be used where needed as recommended by the Forest Service watershed specialist to disconnect runoff from surface water features.
16. Landings in upland areas will be restored after operations are complete using the following methods, as determined by the Forest Service watershed specialist:

    a. Providing adequate ground cover, such as slash, wood chips, or masticated material (spread no more than 6 inches deep). Timber Waiver Attachment A defines adequate ground coverage to mean that 85 percent ground cover has been provided to a depth not to exceed an average of 2 inches with a maximum of 4 inches, to prevent erosion in disturbed areas. “Ground cover” means slash, wood chip, or masticated material, and includes sufficient existing surface rock, needle cast, and brush or other vegetative matter in contact with the soils. Where slash is used as a ground cover, contact with the soil is more important than “depth,” and “depth” shall be considered only where slash has been tracked over to provide full contact with the soils. Existing ground cover shall be considered sufficiently effective where monitoring supports that the rock or vegetation retain soils, reduce raindrop splash, prevent erosion, and promote infiltration.

    b. Ditching, sloping, and water bars may be used where needed as recommended by the watershed specialist to disconnect runoff from surface water features.

    c. Landings will be ripped to approximately a 12-inch depth after ground cover has been spread followed by reseeding with native species. Ripping is not permitted in known infestations of

noxious weeds, and may not be possible in rocky soils; this determination may be made by the contract administrator.

17. Landings will be subsoiled to a 12-inch depth, seeded with a native seed mix of grasses, forbs, and shrubs, and covered with native meadow mowing clippings rather than chip or slash.

3.17.5 Transportation

18. Road improvements will be needed for mechanical treatments on Forest Service Roads 14N42 and 14N44. These roads are currently in level 1 maintenance status (dormant). During Project implementation, road maintenance level will change to level 2 and returned to level 1 when the Project is complete.

19. New temporary roads will be out sloped or other drainage structures installed to ensure for proper drainage. These temporary roads would be obliterated and returned to natural condition after implementation is complete. Temporary roads will not be overwintered. Existing roads and trails would be utilized as fire lines to minimize new ground disturbance.

20. All temporary roads would be returned to their original conditions under the Trail Access and Travel Management Plan (ATM) (e.g., Forest Service trails used as temporary roads would be returned to trail width). All drainage structures will be removed and natural drainage patterns will be re-established.

21. Temporary road segments would be subsoiled to a 12-inch depth, seeded using a culturally significant, native seed mix and mulched with native meadow mowings.

22. Roads will be watered for dust abatement according to *Forest Service Handbook 2409.15*. Determination of dust abatement will be made by the contract administrator. The purpose of dust abatement is to control road surface loss, provide for road user safety, and minimize impact to adjacent resources and neighborhoods.

23. Construction will occur between May 1 and October 15 to the maximum extent possible. If grading or movement of soil becomes necessary between October 16 and April 30, a standard grading exception request will be submitted to TRPA.

3.17.6 Operation and Implementation

24. During implementation, Project work (tree removal and thinning activities) would be limited to between the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday (excluding holidays). Tree cutting activities would not take place within 300 feet of residences. Exceptions are approved by the contract administrator and include the following:

    a. Vehicle or equipment maintenance/repairs.

    b. Weekend work in order to finish up a treatment area in a timely manner, or stabilize an area prior to equipment move out and prior to upcoming storm events (e.g., grading season deadlines).

    c. If fire restrictions limit operating times, extended work hours may be approved.

25. Treated material not removed from the site will be lopped and scattered to a depth of 6 inches. This material will then be disposed of by broadcast burning.

26. Stumps from live conifer trees, with the exception of incense-cedar, greater than 14 inches in diameter within mechanical treatment areas, will be treated with an EPA-registered borate compound, for the prevention of the spread of annosus root disease (*Fomes annosus*). The compound will be applied by hand in an approved granular or liquid form to cut stumps within the effective timeframe. Per Timber Waiver Category 6 condition 23, this pesticide will be applied in conformance with the product's manufacture label instructions.

3.17.7 Prescribed Fire

27. Existing roads and trails will be used as fire line to the extent feasible. When line construction is necessary it will be completed with hand tools, to the minimum width and depth necessary to hold the fire. Minimum Impact Suppression Techniques will be used. Fire lines will be rehabilitated by pulling any berms created back into the line and creating water bars where necessary. Prior to construction of fire lines in meadow areas, consultation with the Forest Service watershed specialist will occur to determine the appropriate construction and decommissioning techniques to avoid soil and water quality impacts.

28. No ignitions will take place within identified stream corridors (i.e., within 75 feet of Class I, 50 feet of Class II and intermittent, and 25 feet of Class III waterbodies); fire will be allowed to back into these corridors. Ignitions may take place within SEZs if necessary to facilitate fire spread through the area.

3.17.8 Wildlife and Fish

29. For treatments within aspen stands:

    a. Woody slash should be removed to allow sunlight to reach the forest floor, unless a prescribed fire is planned to stimulate additional suckering. In the latter case, only scattered branches and tops should be left (broadcast burning of heavy fuel loadings may generate sufficient heat to kill too many shallow aspen roots and result in poor suckering).

    b. Prescribed burn activities in meadows and aspen stands are desired; however, they should be designed to protect existing late seral vegetation (e.g., willow along streams and within meadows, as well as larger overstory aspen trees).

30. Three large-diameter trees per acre (e.g., large coarse woody debris) will be left on the ground, including recently felled trees, without exceeding the desired fuel load. Retention of wood in the largest size classes and in decay classes 1, 2, and 3 would be emphasized. The effects of follow-up prescribed fire in achieving desired down woody material retention levels will be considered (SNFPA 51.10).

31. Where thinning occurs, Jeffrey/ponderosa pine and cedar would be favored for retention, as well as desired riparian species, such as aspen and willow.

32. Within the Project area, any sightings of large sticks, nests, or dens with recent signs of activity will be reported to the Forest Service biologist. Limited Operating Periods (LOPs) are currently not required, but can be implemented at the discretion of the forest biologist.

33. Four of the largest standing snags per acre will be left. Snags should be clumped and distributed irregularly across the treatment units (SNFPA 51.11).

34. Some mid- and large-diameter live trees that are currently in decline, have substantial wood defect, or have desirable characteristics (e.g., teakettle branches, large-diameter broken top, large cavities in the bole) will be retained to serve as future replacement snags and to provide nesting structure (SNFPA 51.11).

35. Prior to project implementation, surveys for willow flycatchers would be conducted to determine the locations of any active nest. If nests are found, they will be protected in accordance with the SNFPA (Forest Service 2004a) which prohibits thinning, prescribed fire, and restoration activities within suitable habitat surrounding the active nest sites between June 1 and August 31.

36. Directional falling will be used to keep felled trees out of intermittent and perennial streams unless the channel reach is identified as deficient in large woody debris, in which case a Forest Service fisheries biologist shall select trees greater than 12-inches dbh to be felled directionally into the channel.

37. Leave existing downed trees and large woody debris that are in Class I or Class II waterbodies in place unless channel stability needs, as determined by a Forest Service fisheries biologist and/or hydrologist, dictate otherwise.

3.17.9 Rare Plants

These measures are designed to protect unique plant populations and/or habitat from damage.

38. A Forest Service botanist will be notified if any Region 5 sensitive plant or Forest Service special interest species is identified during Project implementation. Depending on the species, design features may need to be implemented. Design features could range from avoidance or allowing Project activities to occur within the population or within a buffered area around the population. It is recognized that restoration activities may require short-term impacts; however, some species may be able to withstand these short-term impacts, or in some cases these may improve the populations.

    Scutellaria galericulata, a Forest Service special interest species, was identified in the Project area and will be monitored pre- and post-Project implementation. This is the only targeted rare plant species that was identified in the Project area. This species has a state rank of S2 (imperiled) and a California Rare Plant Rank of 2.2 (i.e., rare, threatened, or endangered in California, but more common elsewhere). Project activities will be allowed to occur within this population, because this Project is expected to improve habitat for this species. Lamb et al. (2003) found that this species increased in abundance at burn sites. They hypothesized the increased population was a result of increased light from removal of the canopy.

3.17.10 Non-native Invasive Plant Species

These measures are intended to protect native plant and animal species and associated habitat that are unique to the Project area. The following RPMs will be implemented to control impacts due to invasive weeds.

39. Known weed infestations will continue to be monitored and surveyed for new occurrences in portions of the Project area with focus on temporary roads and landings prior to implementation. Weed infestations within the treatment area or along travel routes associated with the Project area will be treated using approved methods, or flagged and avoided according to the species present and Project constraints. Staging areas (e.g., for equipment, materials, or crews) will not be located in weed-infested areas. As of 2011 surveys, the only invasive species known to occur in the project area is cheatgrass (*Bromus tectorum*).

40. All off-road equipment used on this Project will be washed before being moved into the Project area to ensure that the equipment is free of soil, seeds, vegetative material, or other debris that could contain or hold seeds of invasive weeds. Off-road equipment includes all logging and construction equipment and brushing equipment such as brush hogs, masticators, and chippers; it does not include log trucks, chip vans, service vehicles, water trucks, and pickup trucks. Equipment will be considered clean when visual inspection (by the contract administrator) does not reveal soil, seeds, plant material, or other such debris. When working in known weed-infested areas, equipment will be cleaned before being moved to other Forest Service lands that do not contain invasive weeds.

41. All earth-moving equipment, gravel, fill, or other materials are required to be weed free. Sand, gravel, rock, or organic matter from an approved on-site source will be used.

42. Road and trail staging areas and landings would be only as large as needed for safe operation. Staging areas will be revegetated to discourage the establishment of invasive weeds. Forest Service specialists will determine which sites need revegetation.

43. Weed-free mulches and seed sources will be used. Topsoil from the Project area will be salvaged for use in on-site revegetation when possible, unless contaminated with invasive weeds. All activities that require seeding or planting must utilize locally collected native seed sources when possible. Plant and

seed material should be collected from or near the Project area, from within the same watershed, and at a similar elevation when possible. Persistent non-natives such as cultivated timothy (*Phleum pratense*), orchard grass (*Dactylis glomerata*), or ryegrass (*Lolium* spp.) will not be used. This requirement is consistent with the Forest Service Region 5 policy that directs the use of native plant material for revegetation and restoration for maintaining "the overall national goal of conserving the biodiversity, health, productivity, and sustainable use of forest, rangeland, and aquatic ecosystems." Seed mixes will be approved by a Forest Service botanist.

44. Disturbed sites where infestations of invasive plants are likely to become established will be revegetated. Revegetation with plants native to the area would occur at landings, staging areas, and other highly disturbed sites to reduce risk of invasion from non-native invasive species. Revegetation could include tilling, mulching, plantings, watering, and seeding with native shrubs, forbs, and grasses. Sites would be evaluated for revegetation needs based on future use of the site, extent of disturbance, accessibility, and similar parameters.

3.17.11 Air Quality

45. A burn plan will be prepared and reviewed by the Fire Management Officer and the Forest Supervisor. In addition to the burn plan, a Smoke Management Plan will be prepared, which is the basis for obtaining a burn permit from the El Dorado County AQMD. To minimize the effects of prescribed burning on air quality, monitoring, mitigation, and contingency measures will be identified in the Smoke Management Plan. Desirable meteorological conditions, such as favorable mixing layer and transport wind speeds, will be required in the Smoke Management Plan to facilitate venting and dispersion of smoke from populated areas.

3.17.12 Scenic Resources

46. Meadow restoration and stand improvement work will be accomplished in a manner that closely duplicates the existing lines, forms, colors, and textures of the surrounding landscape character, to the extent practical.

47. Cut stump heights will be minimized. Stump heights will not exceed 6 inches measured from the uphill side.

3.17.13 Recreation

48. A Project Implementation Plan will be prepared to ensure that all potential effects to recreationists and users are minimized through a well-planned schedule. The plan will address the following phases and requirements:

    A. Pre-Implementation Phase:

    Develop a Communication and Sign Plan that includes signage posted at the access road and trailhead, as well as other trailheads from which Desolation Wilderness users might access the area that describes the purpose of the Project and provides safe travel suggestions. Ensure permitting locations for Desolation Wilderness (including the William Kent campground, Pacific Ranger District, Taylor Creek Visitor Center, and LTBMU Supervisor's Office, are informed regarding project activities and potential short-term road closures.

    Post Project information and potential effects to Desolation Wilderness access on the LTBMU and Eldorado National Forest public websites, as well as the Pacific Crest Trail Association website, as soon as the Project implementation schedule is known.

    B. Construction Phase:

    Due to potential safety hazards to the public inherent in the Project process, implement the following strategies: establish a Desolation Wilderness trailhead bypass trail on existing disturbed areas in conjunction with Project phasing, or provide safety escorts for recreation users to

maintain public access to and from the wilderness via the trailhead. If the Forest Supervisor determines that safe access to the trailhead cannot be provided, temporary Forest Closures may be issued. Adequately post any temporary closures with signage that meets Forest Service design standard guidelines.

3.17.14 Cultural Resources

In addition to a Washoe Tribe monitor being on-site during site preparation and Project implementation, the Forest Service and contractor will conduct the following RPMs for the protection of known and unknown cultural resources:

49. Recorded cultural sites will be flagged and avoided by Project activities and locations. Boundary flagging will be communicated to the appropriate Forest Service administrators and specialists responsible for Project implementation so that pertinent importation will be incorporated into implementation planning, documentation, and contracting.
50. If previously unidentified cultural sites are discovered during planning activities, work in the area shall stop and the Forest Service Heritage Program manager will be notified to recommend a course of action per the consultation process outlined in Section 800.13 of the Advisory Council on Historic Preservation's Regulation 36 CFR 800.
51. The Project will avoid historic properties. Avoidance means that no activities may affect historic properties, unless specifically identified in the Programmatic Agreement.
52. Monitoring by Forest Service Heritage Program specialists and the Washoe Tribe will be used to enhance the effectiveness of RPMs. The results of monitoring will be documented in cultural resource reports and the Infra database.
53. If Native American artifacts and/or human remains are discovered, work in the immediate area of the discovery shall stop, and the Wilton Rancheria and the Washoe Tribe of Nevada and California will be notified in accordance with the provisions stated in the Archaeological Resources Protection Act [16 USC 469], Native American Graves Protection and Repatriation Act [25 U.S.C. 3001-30013], California Health and Safety Code section 7050.5, and Public Resources Code section 5097.9. The discovery area will be flagged and protected until the LTBMU Tribal Liaison or representative, a qualified archaeologist, and Wilton Rancheria and/or Washoe Tribal representative (as appropriate to identify the discovery) can assess the site.

3.18 Project Permitting and Approvals

The following Project-level permitting approvals and authorizations have been or will be obtained for Project implementation.

3.18.1 Regional Water Quality Control Board – Lahontan Region

The Lahontan Water Board staff reviewed the Project for eligibility for and enrollment under the 2014 Timber Waiver and will serve as the lead agency for Project-level CEQA compliance for pursuing State of California grant funding. The Forest Service conducted a field walk with Lahontan Water Board staff on July 27, 2011, August 2, 2012, and August 15, 2018. Forest Service staff has worked with Lahontan Water Board staff to ensure that the Project actions will comply with the Timber Waiver Conditions for Category 6 project types and that Timber Waiver Attachment N, Basin Plan Prohibition Exemption, findings can be made.

3.18.2 Tahoe Regional Planning Agency

The TRPA is the administering agency for the EIP. The Project is an EIP project. As the EIP administrator and permitting agency, TRPA provides project review. Approval of the Project requires preparation of a

TRPA Initial Environmental Checklist (IEC). The Project must also comply with the TRPA RPU and the TRPA Code. TRPA staff issued a FONSE for the Project on December 10, 2018, and approved the SEZ boundary line adjustment, which excludes the two southern landings with temporary access roads from the TRPA-designated SEZ and appropriately locates these Project features in areas of upland habitat, hydrology, and soils. **Appendix B** contains the TRPA findings and approvals for the Project.

3.18.3 El Dorado County Air Quality Management District

The El Dorado County AQMD works to improve air quality and quality of life for El Dorado County residents. To control the generation of fugitive dust during project implementation, projects in El Dorado County must conform to Rule 223, Fugitive Dust, specifically Rule 223.1 – Construction, Bulk Material Handling, Blasting, Other Earthmoving Activities and Carryout and Trackout Prevention.

The Project will require an AQMD Burn Permit, a permit issued by a designated fire agency and containing the requirements of Section 300.4 B. of Rule 223. For any open burning, an appropriate permit is always required, unless exempted. Forest management burning is the use of open fires, as part of a forest management practice, to remove forest debris or for forest management practices that include timber operations, silvicultural practices, or forest protection practices. Forest management and range improvement burning are allowed by complying with the following sections of Rule 223:

1. Section 300.3 C. Minimum Drying Time.
2. Section 300.3 D. No-Burn Day.
3. Section 300.3 F. Smoke Management.
4. Section 300.4 B. Burning Permit
5. Section 300.4 C. Burn Plan.
6. Section 300.4 D. Burning Report.
7. Section 300.4 E. 72-Hour/48-Hour Forecast.
8. Section 300.4 F. 7-Day Notice.

No burning shall be conducted for the improvement of land for wildlife or game habitat until the person desiring to conduct such burning obtains from the California Department of Fish and Game (CDFG) a written statement certifying that the burning is desirable and proper for the improvement of land for wildlife or game habitat and such a statement is filed with the air pollution control officer having jurisdiction in the area in which the burning is to take place. As to burning conducted by the Forest Service, the service shall, on its own behalf issue and file such statements (36 CFR 241.2).

All open outdoor fires shall be ignited only with approved ignition devices as defined in Section 300.2 of this rule. Smoke management requirements include the following:

1. Material to be burned shall be arranged so that it will burn with a minimum of smoke.
2. Only the amount that can reasonably be expected to completely burn within the following 24 hours should be ignited in any one day, except for large trees (diameter of 6 or more inches). This does not include prescribed burning.
3. All outdoor fires shall be ignited only with approved ignition devices as defined in Section 300.2 of this rule.
4. Material to be burned shall be ignited as rapidly as practicable within applicable fire control restrictions.
5. Burning shall be curtailed when smoke drifting into a nearby populated area becomes a public nuisance.

6. No material shall be burned unless it is free of tires, household rubbish, tar paper, and construction debris; is reasonably free of dirt, soil, and moisture; and is loosely stacked in such a manner to promote drying and ensure combustion with a minimum of smoke.

The Burning Permit requirements are as follows:

> *a. No person shall knowingly set or permit open outdoor fires unless that person has been issued a valid permit by the Air Pollution control Officer or a designated agency (Section 41852 and PRC Section 4423).*
>
> *b. A permit shall not be issued unless information is provided as required by the APCO or a designated agency, including: name and address of the applicant, location of proposed burn, acreage or estimated tonnage, and type of material to be burned.*
>
> *c. Each permit issued shall bear a statement of warning containing the following words or words of like or similar language: "This permit is valid only on those days during which agricultural burning is not prohibited by the CARB or the El Dorado County AQMD pursuant to section 41855 of California Health and Safety Code Section 41854".*
>
> *d. A permit shall not be valid unless information is provided as required by the designated fire protection agency for fire protection purposes.*
>
> *e. The designated agency shall forward the permit information received from applicants to the APCO upon request.*
>
> *f. Such person, or his representative, shall have the permit available for inspection at the burn site during the burn.*

The Burn Plan requirements are as follows:

> *The following information will be provided to the APCO for review and approval at least thirty (30) days in advance of the proposed burn.*
>
> 1. *Location and specific objectives of proposed burns.*
> 2. *Acreage or tonnage, type, and arrangement of vegetation to be burned.*
> 3. *Directions and distance to nearby sensitive receptor areas.*
> 4. *Fuel condition, combustion, and meteorological prescription elements, developed for the project.*
> 5. *Projected schedule and duration of project ignition, combustion and burn down.*
> 6. *Specifications for monitoring and verifying critical project parameters.*
> 7. *Specifications for disseminating project information.*
> 8. *Statement from U.S. Forest Service of the intent to use of prescribed fire as the primary objective for wildlife habitat improvement.*

A report of burning during each calendar year shall be submitted to the AQMD within 15 days of the end of the calendar year. The report shall include the estimated tonnage or acreage of each type of waste burned during the calendar year.

3.19 Other Environmental Review

3.19.1 National Environmental Quality Act

Council on Environmental Quality regulations allow federal agencies to exclude from documentation in an Environmental Assessment (EA) or Environmental Impact Statement (EIS) categories of actions that do not individually or cumulatively have a significant effect on the human environment. Originally, a Decision Memorandum was signed for the Meeks Creek Meadow Restoration Project in June 2010. During initial implementation activities it was apparent that some aspects of the proposed action could not be successfully and safely implemented. The LTBMU Forest Supervisor concluded that the Forest Service Interdisciplinary Team needed to reconvene to revise the proposed action, conduct additional surveys to comply with NEPA requirements, re-scope to agencies and members of the public, and complete a new Decision Memorandum. Through this process the proposed action was modified to ensure that the goals of the Project were met while confirming the planned activities could be implemented effectively. No modifications were made to the actions associated with the Camp Wasiu Girl Scout Camp clean-up.

The new Decision Memorandum was issued on May 20, 2013. Based on the agency's experience and knowledge, the LTBMU Forest Supervisor determined that this proposed action fits under the following category per *Forest Service Handbook* 1909.15: Chapter 31.2 – Categories of Actions for Which a Project or Case File and Decision Memorandum Are Required, Category (6) timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than 1 mile of low standard road construction (36 CFR 220.6 [e][6]).

This Project is categorically exempted because no extraordinary circumstances exist potentially having effects that may individually or cumulatively have a significant effect on the human environment. The findings for this determination and environmental clearance are presented in the Forest Service's 2013 Decision Memo (LTBMU 2013).

3.19.2 Tahoe Regional Planning Agency

The Project area is entirely located in the Lake Tahoe Basin and is therefore under the jurisdiction of the TRPA. TRPA is the lead agency under the Tahoe Regional Planning Compact (PL 96-551 94 Statute 3233). As such, an IEC was prepared in accordance with Article VII of the Tahoe Regional Planning Compact, TRPA revised Code Section 3.3, specifically Subsection 3.3.2, and Article VI of the TRPA Rules of Procedure.

TRPA utilizes an IEC, which is used to determine whether an EIS shall be prepared for a project. The IEC provides information identifying the environmental effects of the Project and includes:

- An identification of the environmental effects;
- A discussion of proposed mitigation for significant adverse effects, if any;
- The name of the person who prepared the responses; and
- Supporting data or evidence to support the responses.

TRPA issued the FONSE and Project approvals on December 10, 2018 (**Appendix B**).

4.0 EXISTING CONDITIONS

This section describes the existing conditions of the Project area to establish baseline conditions for the environmental analysis sections.

4.1 General Plan Designations, Zoning, and Surrounding Land Use

Land uses surrounding the Project area include a boundary with Desolation Wilderness, the SR 89 right-of-way, Meeks Bay Marina and Campground, the developed residential areas adjoining Rubicon Bay, and Sugar Pine Point State Park, which is part of the State of California Park system. The Project area is located within the TRPA PAS for Meeks Creek (PAS 148) and has a land use classification of Conservation and zoning district of Open Space. The area serves as a trailhead to Desolation Wilderness. Resource Management is an allowed Permissible Use in PAS 148, including the following uses that may pertain to the Project:

- Regeneration Harvest;
- Sanitation Salvage Cut;
- Selection;
- Special Cuts;
- Thinning;
- Timber Stand Improvement;
- Early Successional Stage Vegetation Management;
- Nonstructural Fish Habitat Improvement;
- Nonstructural Wildlife Habitat Management;
- Range Pasture Management;
- Fuels Treatment;
- Insect and Disease Suppression;
- Prescribed Fire Management;
- Sensitive Plant Management;
- Uncommon Plant Management;
- Erosion Control;
- Runoff Control; and
- SEZ Restoration.

4.2 Land Disturbance, Land Capability, and Land Coverage

The Project proposes no new land coverage or permanent disturbance, as defined by TRPA Code Chapter 30. To implement actions for conifer removal, temporary disturbance associated with access road maintenance, temporary road creation, and delineation of landings is necessary. Temporary disturbance from roads and landings is located outside of TRPA land capability district (LCD) 1b or SEZ. **Figure 3,** Existing Conditions of the Project Area, depicts the extent of the Project area and boundary and illustrates the location of the up to seven proposed landings, two short temporary roads, the Meeks Creek channel system (i.e., Class I waterbody), and ephemeral channels (i.e., Class III waterbodies).

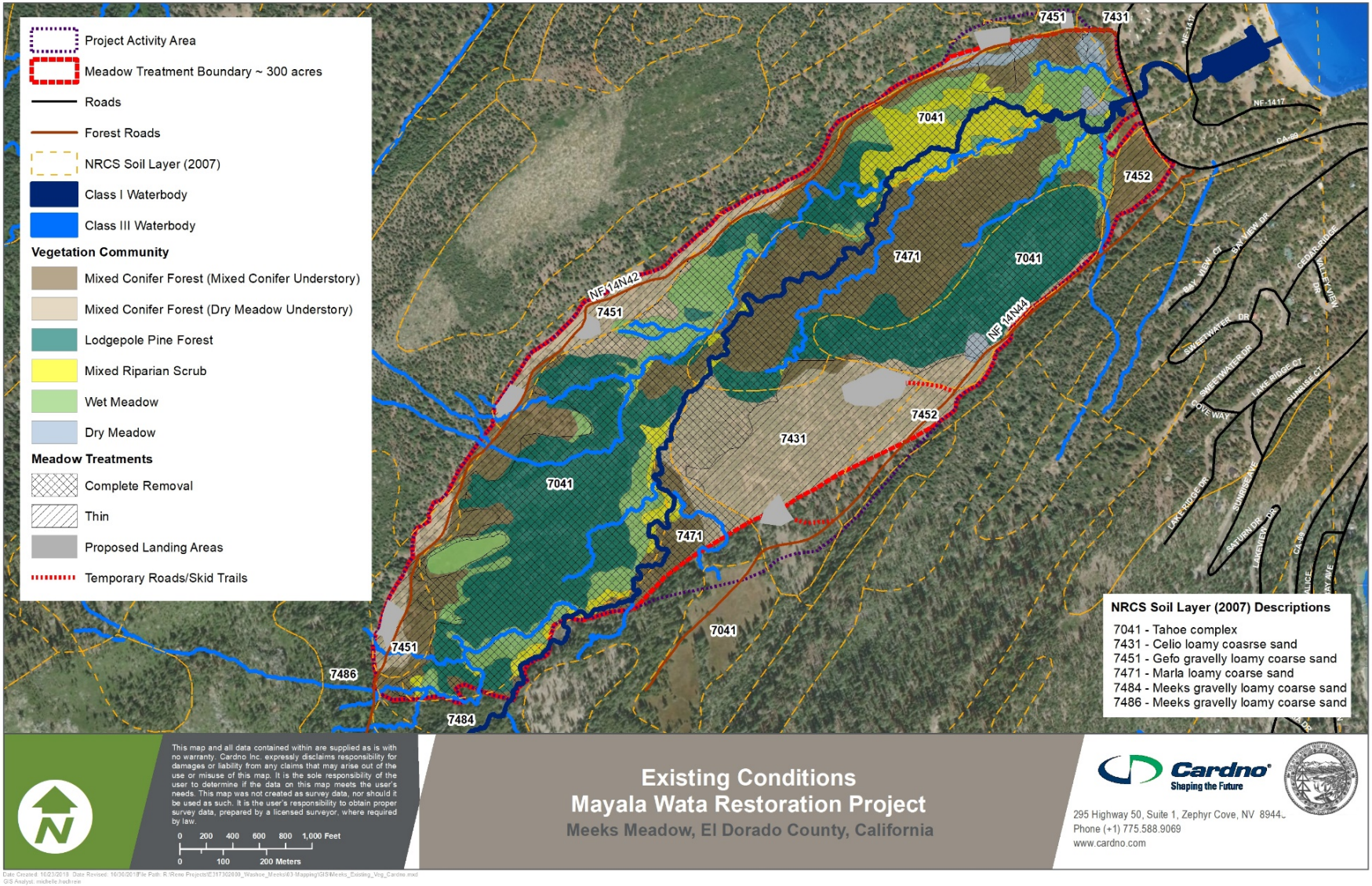

Figure 3 **Existing Conditions of the Project Area**

4.3 Hydrology and Water Quality

Meeks Creek originates from Rubicon Lake, 1.2 miles northeast of Phillips Peak in Desolation Wilderness on the western slope of the Lake Tahoe Basin. The creek is tributary to Lake Tahoe in Meeks Bay, California, and is a TRPA Priority 1 Watershed (TRPA n.d.). The Meeks Creek watershed is around 5,608 acres (Murphy and Knopps 2000). The Forest Service monitored water quality in the creek in the 1980s in association with the Wasiu I and II timber sales. These sales were implemented between 1989 and 1995. The purpose of this harvesting was to remove stands of mistletoe-infected lodgepole and decadent Jeffrey pine and white fir from the Meeks Creek meadow. Thirty to 100 percent of the stand within the harvest area was removed. Approximately 164 acres were harvested. Water quality monitoring continued through the early 2000s, but was discontinued due to reprioritization of funding and based on a sampling period of record with little to no violations of WQOs. Current water quality conditions are not regularly monitored by the Forest Service, but citizen monitoring is conducted each year at two Meeks Creek sampling sites during the annual Tahoe-Truckee Snapshot Day. For 2017, citizen monitoring reported pH, turbidity, specific conductivity, total nitrogen, and total phosphorus to be within the normal range of the South Lake Tahoe region, while Meeks Creek had the lowest recorded water temperatures of Snapshot Day 2017 and correspondingly, a dissolved oxygen level of 7 milligrams per liter (mg/L), which is below the 8 mg/L standard. Fecal coliform was detected at the sampling site closest to the lake (and outside of the Meeks Meadow Project area); 38 colony forming units per 100 milliliters (cfu/100 mL) were reported, which is above the 20 cfu/100 mL standard for the Lake Tahoe Region (Tahoe Truckee Snapshot Day 2017).

Meeks Creek is a perennial stream or Class I waterbody, as defined by the 2014 Timber Waiver, the 2013 FPRs, and Title 14 CCR, Section 916.5, Table 1. Attachment B, Table B-1, of the Timber Waiver designates a WBBZ width of 75 feet, as measured along the surface of the ground from the top edge of the Meeks Creek streambank. For cable yarding operations, there is the potential to reduce up to 50 feet from the WBBZ width, depending on Project area topography and operable soil conditions, such that operations may occur up to 25 feet from the main channel.

Meeks Creek has numeric WQOs for total dissolved solids, chloride, total nitrogen, total phosphorus, and total iron, which are listed in Basin Plan Table 5.1-3, and the following beneficial use designations (Lahontan Water Board 1995):

- Municipal and Domestic Supply;
- Agricultural Supply;
- Groundwater Recharge;
- Water contact Recreation (Rec-1);
- No-contact Water Recreation (Rec-2);
- Commercial and Sportfishing;
- Cold Freshwater Habitat;
- Wildlife Habitat;
- Migration of Aquatic Organisms; and
- Spawning, Reproduction, and Development.

Detailed groundwater data for the Project area are unavailable due to lack of groundwater instrumentation within the meadow. Surface hydrology and groundwater levels are driven by the seasonal precipitation patterns, temperature, and surface-groundwater interactions. Swanson Hydrology and Geomorphology (SHG 2009) reported Meeks Creek to generally be in good condition with regard to geomorphic function

and having a high resilience to abrupt geomorphic change. Based on field work conducted for the development of the Meeks Meadow Restoration and Management Plan (SHG 2009), Meeks Creek has a low width to depth ratio, contains large woody debris, and provides complex and varied aquatic cover and habitat. Under the current climatic/hydrologic regime, the Class I waterbody is generally stable in its current configuration.

Streamflow is ephemeral in the western drainages, and depending on spring runoff and as a result of localized substrate and groundwater conditions, flow can be intermittent through significant portions of Meeks Meadow. Groundwater levels are expected to be the highest near the perennial channel (Class I waterbody). However, meadow and wetland vegetation can be consider a proxy indicator for depth to groundwater, and as wetland species transition from obligate status to facultative or upland status (**Figure 3**), groundwater levels decrease. The Project is expected to increase groundwater levels across the entire meadow area as a result of conifer removal. The Forest Service and Washoe Tribe anticipate implementing groundwater monitoring, but at this time funding has not been identified.

4.4 Stream Environment Zone

SEZ, a TRPA land capability classification, refers to biological communities that owe their characteristics to the presence of surface waters or a seasonal high groundwater table. The criteria used for field identification and delineation of SEZs are unique to the Lake Tahoe Hydrologic Unit.

At the landscape-level, the entirety of Meeks Meadow was delineated as TRPA SEZ or LCD 1b. During Project planning, Forest Service staff proposed landings that are necessary for implementation of conifer thinning and removal activities in areas observed as uplands during field visits and supported by past and existing vegetation mapping, Natural Resource Conservation Service (NRCS) soil map units, absence of surface hydrology and near surface groundwater, and multiple years of field observations and determinations for operable soil conditions. The LTBMU SEZ Sensitivity Rating System was applied during NEPA Project planning to make site-specific determinations for individual treatment units. This rating assists with determining to what extent mechanized equipment will be used and the level of monitoring that will be needed during pre- and post-treatments. The rating considers proximity to stream channels or other water features, accessibility, and soil moisture conditions at the time of treatment operations.

Cardno staff, along with Forest Service staff and Lahontan Water Board staff, conducted a site walk on August 15, 2018. Cardno staff and Forest Service staff repeated this site walk on August 20, 2018, with TRPA staff, Julie Roll and Paul Nielsen. Both site visits confirmed the findings presented below that pertain to the absence of SEZ primary indicators in portion of the Project area where Landings 1/Southeast and 2/Southwest and the approximately 350- and 300-foot temporary roads are proposed.

An SEZ boundary adjustment was proposed along the transition zone where primary indicators are absent but where a single secondary indicator (i.e., secondary riparian vegetation) was observed. Through the TRPA EIP Project application and approvals, the SEZ boundary, as illustrated in **Figure 4**, was approved for the Project area.

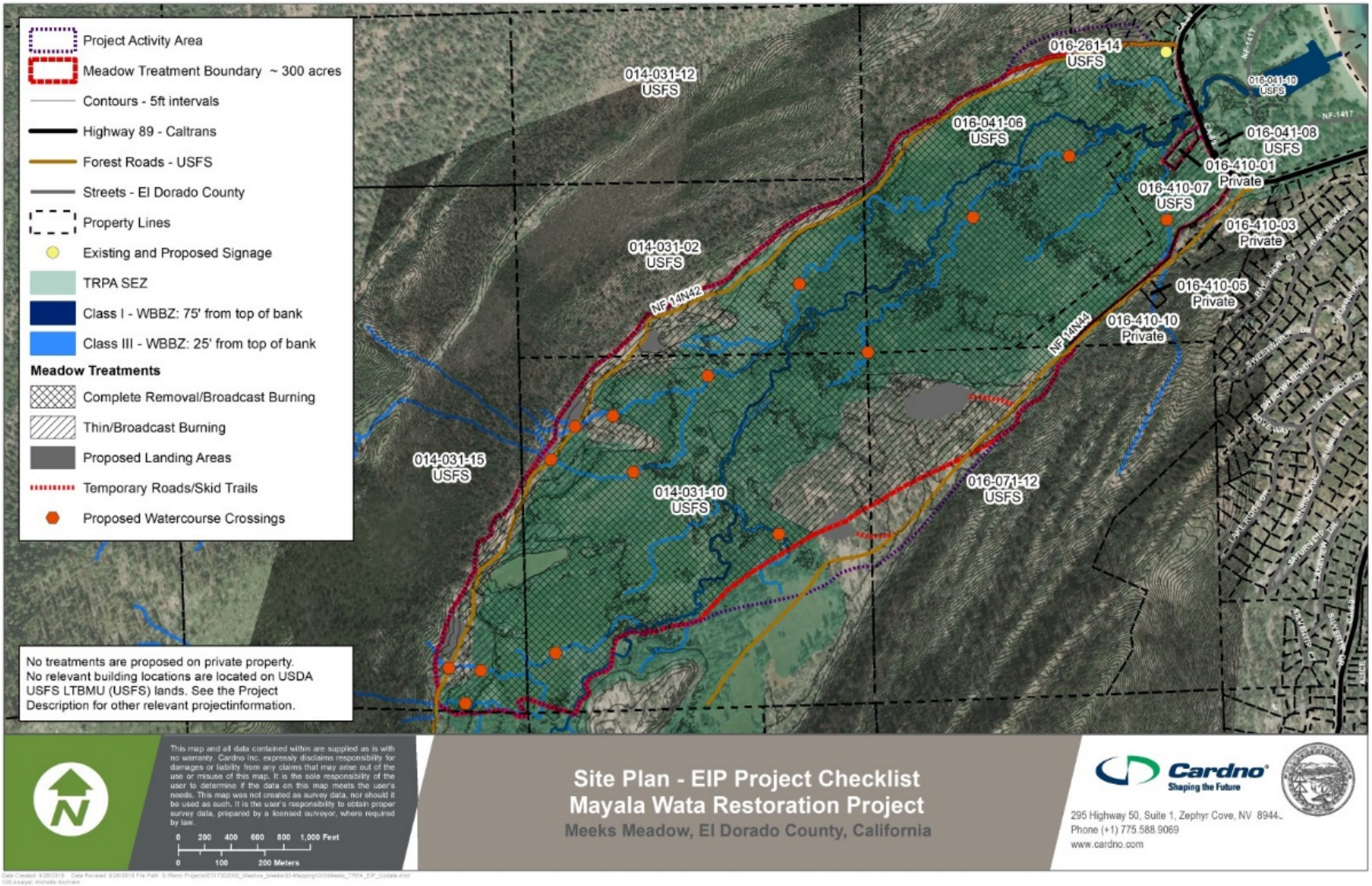

Figure 4 TRPA SEZ Boundary.

4.5 100-Year Floodplain

The 100-year floodplain is defined as areas determined based on delineations completed or approved by the U.S. Army Corps of Engineers (USACE), the Federal Emergency Management Agency (FEMA), or an individual qualified to make floodplain delineations. If these agencies have not completed formal delineations the Lahontan Water Board staff may agree to the use of best professional judgment; field verification by staff may be needed. These areas include land adjacent to waterbodies that extend to the outer perimeter of lands that experience flooding or are inundated with water during 100-year flood events. Within the Lake Tahoe Hydrologic Unit 100-year floodplains are sometimes, but not always, included within SEZs. A floodplain only qualifies as SEZ if other secondary indicators of a SEZ are present. If a 100-year floodplain is considered a SEZ, the SEZ prohibitions and exemption criteria apply (Basin Plan Section 5.7). FEMA Flood Insurance Rate Maps identify the entirety of the Project area as Zone D – Unclassified (FEMA 2017). The Zone D designation is used for areas where there are possible but undetermined flood hazards. In areas designated as Zone D, no analysis of flood hazards has been conducted. This information may be important for projects that propose structures and housing.

4.6 Soils

Tahoe complex and Meeks, Celio, Gefo, and Marla soil units, as mapped by the NRCS in the Tahoe Basin Soil Survey – California Nevada (NRCS 2007) comprise the Project area. **Table 2** presents the soil characteristics that are associated with these soil map units.

Table 2. Project Area Soil Map Units and Soil Characteristics

NRCS Soil Map Unit	Map Unit Name	Map Unit Slope	Notes	Drainage	Hydrologic Soil Group
7041	Tahoe complex	0-2%	Water table present	Very poorly drained	C/D
7431	Celio loamy coarse sand	0-5%	Occasional ponding	Somewhat poorly drained	A/D
7451	Gefo gravelly loamy coarse sand	2-9%	Surface runoff very low	Somewhat excessively drained	A
7471	Marla loamy coarse sand	0-5%	Frequent ponding	Poorly drained	A/D
7484	Meeks gravelly loamy coarse sand	5-15%	Surface runoff very low; Extremely bouldery	Somewhat excessively drained	A
7486	Meeks gravely loamy coarse sand	30-70%	Surface runoff low; Extremely bouldery	Somewhat excessively drained	A

Source: Tahoe Basin Soil Survey (NRCS 2007)

4.7 Vegetation

Figure 3 above illustrates the vegetation communities that are mapped within the Project area. As of 2011 surveys, the only invasive species known to occur in the Project area, along the road near SR 89, is cheatgrass (*Bromus tectorum*). Marsh skullcap (*Scutellaria galericulata*), a Forest Service special interest species, was identified in the Project area and will be monitored pre and post-Project implementation. This is the only targeted rare plant species that was identified in the Project area. This species has a state rank of S2 (imperiled) and a California Rare Plant Rank of 2.2 (rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California). Project activities will be allowed to occur within this population, because this Project is expected to improve habitat for this species. Lamb et al. (2003) found that this species increased in abundance at burn sites and hypothesized the increased population was a result of increased light from removal of the canopy. Population status is and will continue to be monitored by Forest Service staff.

No suitable habitat exists for the following species (LTBMU 2012a): *Arabis rigidissima* var. *demote*; *Arabis tiehmii*; *Dendrocollybia racemose*; *Draba asterophora* var. *asterophora*; *Draba asterophora* var. *asterophora*; *Draba asterophora* var. *macrocarpa*; *Erigeron miser*; *Eriogonum umbellatum* var. *torreyanum' Hulsea brevifolia*; *Lewisia kelloggii* ssp. *Hutchisonii*; *Lewisia kelloggii* ssp. *Hutchisonii*; *Lewisia kelloggii* ssp. *Kelloggii*; *Lewisia longipetala*; *Rorippa subumbellata*; and *Pinus albicaulis*.

The Project area contains suitable habitat for the following species, and therefore, undiscovered isolated individuals may be inadvertently be affected but would not likely result in a trend toward federal listing or loss of viability (LTBMU 2012a): *Botrychium ascendens*; *Botrychium crenulatum*; *Botrychium lineare*; *Botrychium lunaria*; *Botrychium minganense*; *Botrychium montanum*; *Bruchia bolanderi*; *Epilobium howellii*; *Helodium blandowii*; *Meesia triquetra*; *Meesia uliginosa*; and *Peltigera hydrothyria*.

4.8 Wildlife

The Meeks Meadow complex contains approximately 77 acres of willow flycatcher emphasis habitat (LTBMU 2012b). Surveys for willow flycatcher are conducted using *A Willow Flycatcher Survey Protocol for California* (Bombay et al. 2003). These surveys require at least two visits to each site in June and July. The willow flycatcher population in the Lake Tahoe Basin is monitored annually by the Forest Service and its partner agencies. There are 18 known, historically occupied willow flycatcher sites within the basin. Seven of these have had attempted or successful nesting efforts. None of the nesting sites are within the Project area.

Willow flycatcher surveys were conducted in willow habitat on the east end of the Meeks Meadow complex in 2003 to 2005 with no detections. In 2010 three separate detections occurred during non-Forest Service passerine surveys: two in the deciduous riparian habitat along the riparian corridor in the west end of the meadow and one in the mature willows at the east end of the meadow. Due to these detections, both areas were surveyed in 2011 but no detections were made. The Forest Service will conduct pre-Project surveys prior to implementation. If nests are observed, then an LOP will be initiated.

Lahontan cutthroat trout (LCT) (*Oncorhynchus clarkii henshawi*), listed as threatened under the Endangered Species Act, may occur in Meeks Creek, but no Project actions are proposed for Meeks Creek. There are no known occurrences or suitable habitat for Sierra Nevada yellow-legged frog (SNYLF) (*Rana sierrae*), northern leopard frog (*Rana pipiens*), or Lahontan lake tui chub (*Gila bicolor pectinifer*). The Project may affect individuals of the Great Basin rams-horn (*Helisoma newberryi newberryi*) that at times access the Project area, but short-term Project actions are not likely to result in a trend toward federal listing or loss of viability.

5.0 AESTHETICS

This section analyzes Project impacts on aesthetics during construction and operations. Potential impacts were evaluated based on information developed through site visits; review of existing published documents, including TRPA mapping of scenic travel route roadway unit ratings and bicycle trail viewshed protection area scenic quality ratings; and review of temporary and permanent Project design features.

Table 3 identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 3. Aesthetics Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Have a substantial adverse effect on a scenic vista? (CEQA Ia)	☐	☐	☒	☐
Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (CEQA Ib)	☐	☐	☐	☒
Substantially degrade the existing visual character or quality of the site and its surroundings? (CEQA Ic)	☐	☐	☒	☐
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (CEQA Id)	☐	☐	☐	☒

5.1 CEQA Checklist Analysis

CEQA Ia. Would the Project have a substantial adverse effect on a scenic vista?

Standard of Significance. CEQA defines scenic vistas as viewpoints that provide expansive views of a highly valued landscape for the benefit of the general public as defined by local plans or policies (e.g., TRPA RPU and Scenic Guidelines). Creating visually dominant features that are out of scale with the surrounding landscape constitutes a significant impact to scenic vistas under CEQA (note: Project effects associated with TRPA scenic features are discussed below and not repeated here). Points of significance include: (1) creation of strong visual contrast; (2) reduction in scenic vista area viewed from foreground or middleground; and/or (3) non-compliance with scenic resource goals, policies, or standards of federal, state, or local agencies. CEQA relies on local policies to define scenic vistas.

The access points to the Project area from SR 89 are via existing Forest Service Roads 14N42 and 14N44. Portions of the Project area are visible from SR 89, TRPA Road Unit No. 7, which is currently classified "non-attainment." Thinning and removal of conifers from the Project area will expand the scenic vista from the foreground and middleground, allowing for views of Meeks Meadow and potentially views of Desolation Wilderness beyond the Project area. The Project would comply with TRPA's scenic resource goals and policies and would create less-than-significant impacts to scenic vistas.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA Ib. Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Standard of Significance. The significance criteria outlined above for CEQA Ia also apply to CEQA Ib. CEQA defines a scenic vista as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public as defined by local plans or policies (e.g., TRPA RPU and TRPA Scenic Guidelines). Creating visually dominant features that are out of scale with the surrounding landscape constitutes a significant impact to scenic vistas under CEQA. Points of significance include: (1) creation of strong visual contrast; (2) reduction in scenic vista area viewed from foreground or middleground; and/or (3) non-compliance with scenic resource goals, policies, or standards of federal, state, or local agencies. CEQA relies on local policies to define scenic vistas.

The Project constructs no permanent structures or facilities, and therefore, would not create visible dominant features that would be out of scale with the surrounding landscape. SR 89 is designated a Scenic Highway from the Placer County line to the Alpine County line, which includes the length of SR 89 located in Meeks Bay, California. The Project area does not include the SR 89 corridor, and thus the Project would have no impact to scenic resources within a state scenic highway. As discussed in the analysis for CEQA Ia, through the removal of conifers, the Project would open up views of Meeks Meadow and Desolation Wilderness as seen from the highway corridor, which would be expected to move this section of highway, currently classified as a scenic roadway unit in "non-attainment" by TRPA, toward attainment of TRPA scenic thresholds.

Environmental Analysis: **No Impact**.

Required Mitigation: **None.**

CEQA Ic. Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?

Standard of Significance. Degradation in visual quality or elimination of a specific scenic resource results in a significant impact to scenic resources.

The Project would result in temporary degradation of the visual character and quality of the Project area during timber management activities, specifically landings. Timber management would be conducted intermittently during periods of operable soil conditions and potentially over several years, as detailed in Section 3.13; however, impacts from typical timber management activities on National Forest Lands would not be considered substantial. Landings and temporary roads will be rehabilitated through soil decompaction, mulching, and revegetation with native and culturally significant plant species. The Project area would be restored to pre-European, historic riparian, aquatic, and wetland functions, ensuring its visual character would not be degraded. Therefore, the Project would not substantially degrade the existing visual character or quality of the site and its surroundings, and any impact would be less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA Id. Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Standard of Significance. An increase in night lighting or glare sufficient to enter adjacent residences constitutes a significant impact to day or nighttime views in the Project area.

The Project creates no new source of light or glare and would result in no impact to day or nighttime views in the area from light sources.

Environmental Analysis: **No Impact**.

Required Mitigation: **None.**

6.0 AGRICULTURE & FOREST RESOURCES

This section evaluates the Project's agriculture and forest resource impacts during construction and operations. **Table 4** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 4. Agriculture and Forest Resources Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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? (CEQA IIa)	☐	☐	☐	☒
Conflict with existing zoning for agricultural use, or a Williamson Act contract? (CEQA IIb)	☐	☐	☐	☒
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))? (CEQA IIc)	☐	☐	☐	☒
Result in the loss of forest land or conversion of forest land to non-forest use? (CEQA IId)	☐	☐	☒	☐
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? (CEQA IIe)	☐	☐	☐	☒

6.1 CEQA Checklist Analysis

CEQA IIa. Would the Project 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?

Standard of Significance. A significant impact on agricultural resources may result from a project that involves the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide importance, as defined by the State of California on the Important Farmlands Map, to a non-agricultural use.

The Project area lies within El Dorado County and is constituted entirely of National Forest Lands. There is no agricultural activity or use within the Project area or in the vicinity of the Project area. The Project area does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown

on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Natural Resources Agency. Because no lands designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance exist within the Project area, the Project would result in no impact to these resources.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA IIb. Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Standard of Significance. A conflict with areas zoned for agricultural use under a Williamson Act contract constitutes a significant impact.

The Project area is not zoned for agricultural use and does not contain Williamson Act contracts. Because no such zoning exists within the Project area, the Project would result in no impact to these resources.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA IIc. Would the Project 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))?

Standard of Significance. A conflict with existing zoning for forest land or timberland creates a significant impact. PRC Section 12220, Article 3 (g) defines "Forest land" as land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. PRC Section 4526 defines "Timberland" as land, other than land owned by the federal government and land designated by the board as experimental forestland that is available for, and capable of, growing a crop of tree of any commercial species used to produce lumber and other forest products, including Christmas trees.

Refer to the analysis for CEQA IIb. The TRPA land use designation for the Project area is Conservation with Open Space zoning; therefore, the Project would not conflict with or cause rezoning of forest land, timberland, or land zoned as Timberland Production Zone (TPZ). Although consisting of National Forest Lands, the Project area is a meadow complex that has been encroached upon by conifer species and does not meet the zoning designations of forest land (as defined by PRC Section 4526) or timberland zoned TPZ (as defined by California Government Code Section 51104(g)).

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA IId. Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

Standard of Significance. The loss of substantial forest land, defined above for CEQA IIc, or conversion of forest land to non-forest use creates a significant impact if appropriate permits or approvals, ensuring minimal impact to the overall forest resource, are not obtained.

The Project would not result in loss of forest land. The Project area is entirely comprised of public lands that are managed by the Forest Service and is a meadow complex that has been encroached upon by conifers. The Project area does not contain land designated as forest land or TPZ. Project implementation would thin and remove conifer species that have encroached into the Meeks Meadow complex as a result of fire suppression, Forest Service timber management activities conducted in the late 1980s and early 1990s, and several drought periods, which resulted in lower water table elevations. Restoring the meadow functions within the Project area would not result in a loss of forest lands and would have a less-than-significant impact on such lands and uses.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None**.

CEQA IIe. Would the Project 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?

Standard of Significance. Refer to the analyses for CEQA IIa and CEQA IIb, which conclude no impacts would result to farmland, and the analysis for CEQA IIc, which concludes no impact to forest land or timberland would result.

Environmental Analysis: **No Impact**.

Required Mitigation: **None.**

7.0 AIR QUALITY

This section evaluates the Project's air quality impacts during construction and operations. **Table 5** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 5. Air Quality Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Conflict with or obstruct implementation of the applicable air quality plan? (CEQA IIIa)	☐	☐	☒	☐
Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (CEQA IIIb)	☐	☐	☒	☐
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? (CEQA IIIc)	☐	☐	☒	☐
Expose sensitive receptors to substantial pollutant concentrations? (CEQA IIId)	☐	☐	☒	☐
Create objectionable odors affecting a substantial number of people? (CEQA IIIe)	☐	☐	☒	☐

7.1 CEQA Checklist Analysis

CEQA IIIa. Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Standard of Significance. The federal CAA was passed by Congress in 1970 and last amended in 1990. The CAA gives the federal government (the EPA) authority to establish air quality standards, including setting National Ambient Air Quality Standards (NAAQS) for major air pollutants. States with areas that exceed the NAAQS must prepare a SIP that demonstrates how those areas will attain the standards within mandated timeframes. In California, the EPA has delegated the authority to prepare SIPs to the CARB, which, in turn, has delegated that authority to individual air districts. The Project area is under the jurisdiction of the El Dorado County AQMD and lies within the boundaries of the Lake Tahoe Air Basin, which is in attainment with federal air quality standards. As such, the AQMD is not required to prepare a SIP. **Table 6** below is a summary of the ambient air quality standards for local, state, and federal standards.

Table 6. Summary of Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	TRPA	National Standards	
				Primary[a]	Secondary[b]
Ozone (O_3)	1 Hour	0.09 ppm	0.08 ppm	--	Same as Primary
	8 Hour	0.070 ppm	--	0.070 ppm	
Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	Shall not exceed CAAQS/NAAQS	150 µg/m^3	
	AAM	20 µg/m^3		--	
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	--	--	35 µg/m^3	
	AAM	12 µg/m^3		12.0 µg/m^3	15 µg/m^3
Carbon Monoxide (CO)	1 Hour	20 ppm	--	35 ppm	--
	8 Hour	9.0 ppm	6.0 ppm	9 ppm	
	8 Hour (Lake Tahoe)[c]	6 ppm	--	--	
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm	--	100 ppb	--
	AAM	0.030 ppm		0.053 ppm	Same as Primary
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm	--	75 ppb	--
	3 Hour	--		--	0.5 ppm
	24 Hour	0.04 ppm		0.14 ppm	--
	AAM	--		0.030 ppm	--
Lead	30 Day Average	1.5 µg/m^3	--	--	--
	Calendar Quarter	--		1.5 µg/m^3 (For Certain Areas)	Same as Primary
	Rolling 3-Month Average	--		0.15 µg/m^3	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer	[d]	No National Standards	No National Standards
	8 Hour (Lake Tahoe)	Extinction coefficient of 0.07 per kilometer			
Sulfates	24 Hour	25 µg/m^3	--		
Hydrogen Sulfide	1 Hour	0.3 ppm	--		
Vinyl Chloride	24 Hour	pm	--		

Sources: CARB May 4, 2016; TRPA 2012

[a] Levels necessary to protect the public health.

[b] Levels necessary to protect the public welfare from known or anticipated adverse effects.

[c] State 8-hour CO standard of 6 ppm is specific to the Lake Tahoe Air Basin

[d] Regional Visibility – Achieve an extinction coefficient of 25 Mm^{-1} at least 50 percent of the time as calculated from aerosol species concentrations measured at the Bliss State Park monitoring site (visual range of 156 km, 97 miles). Achieve an extinction coefficient of 34 Mm^{-1} at least 90 percent of the time as calculated from aerosol species concentrations measured at the Bliss State Park monitoring site (visual range of 115 km, 71 miles). Calculations will be made on 3-year running periods using the existing 1991–1993 monitoring data as the performance standards to be met or exceeded.

Sub-Regional Visibility – Achieve an extinction coefficient of 50 Mm^{-1} at least 50 percent of the time as calculated from aerosol species concentrations measured at the South Lake Tahoe monitoring site (visual range of 78 km, 97 miles). Achieve an extinction coefficient of 125 Mm^{-1} at least 90 percent of time as calculated from aerosol species concentrations measured at the Bliss State Park monitoring site (visual range of 31 km, 19 miles). Calculations will be made on 3-year running periods using the existing 1991–1993 monitoring data as the performance standards to be met or exceeded

AAM: Annual Arithmetic Mean

$\mu g/m^3$: Micrograms per cubic meter

CAAQS: California Ambient Air Quality Standards

ppm: Parts Per Million

ppb: Parts Per Billion

Because TRPA's authority is granted directly from Congress, TRPA has the authority to adopt air quality and other environmental quality thresholds, and to enforce ordinances designed to achieve the thresholds. TRPA takes air quality into consideration in its planning and permitting activities to ensure compliance with state and AQMD air quality standards for projects in the Lake Tahoe Air Basin. TRPA has established a number of thresholds and policies regarding local air quality through its RPU (TRPA 2012), 2015 Thresholds Evaluation (TRPA 2016), and 2017 Regional Transportation Plan (RTP) (TRPA 2017). The RPU's goals and policies are designed to achieve and maintain adopted environmental threshold standards and are implemented through the TRPA Code. The RPU includes Policy AQ-1.7, "Promote the reduction of air quality impacts from construction and property maintenance activities in the region," but the TRPA's policies and thresholds are oriented more toward long-term development rather than short-term construction activities.

During timber management actions, various types of equipment and vehicles, as described in Section 3.13, would temporarily operate. Construction exhaust emissions would be generated from timber management equipment, earth movement activities, worker commutes, and material hauling. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants.

Air quality modeling was performed using Project-specific details in order to determine whether the Project would result in criteria air pollutant emissions in excess of the applicable thresholds of significance. Air quality pollutants and emissions were calculated using CalEEMod, Version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for various user types to quantify potential criteria pollutants and emissions. The model (output contained in **Appendix C**) is designed to estimate construction emissions for construction projects and post-construction operations and allows for input of project-specific information. Input parameters were based on default model settings and information provided in the Project description (such as specified equipment, duration of equipment use, and construction season) in Section 3.

The Project tasks with construction-related emissions are presented in **Table 7,** as estimated with CalEEMod. Due to the limited options of land use selections within CalEEMod, "City Park" land use was selected for the model run, as equipment types and default settings would closely match the Project description. The Project tasks with construction-related emissions were defined in the model as Layout, Road and Landing Preparation, Hand Thinning, and Mechanical Thinning, each having specific equipment requirements and durations, as summarized in the CalEEMod output (**Appendix C**). Air quality and GHG emission impacts associated with broadcast burning are addressed separately under the AQMD Burn Permit and associated Burn Plan. The results of the unmitigated emissions modeling were compared to the

significance thresholds, also summarized in **Table 7**, in order to determine the associated level of impact. Although Project construction would temporarily cause localized increases in emission levels, the Project would be in compliance with the significance thresholds for reactive organic gases (ROG) and PM_{10} and level B significance thresholds for oxides of nitrogen (NOx). The Project would comply with the applicable AQMD and TRPA rules and regulations during construction to result in less-than-significant impacts to air quality.

Operational impacts to air quality from broadcast burning would be intermittent, temporary, and driven by Project area conditions necessitating management by prescribed fire. Prescribed fire smoke is generally of less intensive and shorter duration than smoke produced by a wildland fire. Since 1997, over 2,000 acres of landscape underburns and over 8,000 acres of prescribed pile burning has been implemented on the LTBMU. In these areas, surface fuels have been reduced and smaller live trees thinned, creating a zone where a damaging crown fire is less likely, which provides a safer environment for firefighters. The smoke impacts from prescribed burning are short lived and are considerably less than the impacts from the wildfire that is likely to occur if no work is done (Gross et al. 2017).

A Burn Plan will be prepared and reviewed by the LTBMU Fire Management Officer and the LTBMU Forest Supervisor. In addition to the Burn Plan, a Smoke Management Plan will be prepared, which is the basis for obtaining a Burn Permit from the AQMD. In order to minimize the effects of prescribed burning on air quality, the Smoke Management Plan will identify monitoring, mitigation, and contingency measures. Required desirable meteorological conditions, such as favorable mixing layer and transport wind speeds, will be identified in the Smoke Management Plan to facilitate venting and dispersion of smoke from populated areas. Before burning, burn crews wait for favorable conditions that will carry smoke up and disperse it away from smoke sensitive areas. Crews also conduct test burns before igniting larger areas, to verify how effectively vegetation is consumed and how smoke will travel. Implementation of the AQMD Burn Plan and Smoke Management Plan and compliance with the Burn Permit conditions would reduce potential impacts to air quality to a level of less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA IIIb. Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Standard of Significance. A significant long-term (e.g., operational) impact results if the Project causes violations of air quality standards listed in **Table 6** or contributes substantially to an existing or projected air quality violation. As identified by CARB, AQMD, and TRPA, a significant short-term (e.g., construction-related) air quality impact results if construction-generated emissions of ROG, NO_X, PM_{10}, or SO_2 exceed mass emissions of 82 pounds per day (lb/day), or construction-generated emissions of carbon monoxide (CO) exceed mass emissions of 550 lb/day.

The Lake Tahoe Air Basin is in attainment or unclassified for NAAQS, although it is designated a non-attainment area for PM_{10} under the CAAQS and non-attainment-transitional for ozone. Construction activities would generate combustive emissions and fugitive dust. Pollutants such as ROG, NO_x, CO, SO_2, and PM_{10} would be emitted from the use of diesel and gasoline-powered equipment and vehicles during activities such as vegetation removal, excavation and grading, material hauling, and site restoration and from worker vehicles. Fugitive dust (PM_{10}) would result from soil disturbance and demolition.

The AQMD, which is the primary agency with air quality management authority over the Project, has produced a *Guide to Air Quality Assessment* (El Dorado County Air Pollution Control District [APCD] 2002) to be used in assessing air quality impacts for projects that are subject to CEQA. The guide identifies two alternative methods for determining the significance of combustive emissions: the first involves

quantifying fuel use and comparing it to an AQMD threshold, and the second is based on the incorporation of mitigation measures into project design. This IS uses the first method. If exhaust emissions are determined to be less than significant under either approach, then further calculations to determine construction equipment exhaust emissions is not required. For fugitive dust (PM_{10}) emissions, the screening approach is based on use of specific dust suppression measures that the AQMD has determined would prevent visible emissions beyond the boundaries of a project. If those measures are incorporated into the project design, then further calculations to determine PM_{10} emissions are not required.

The AQMD has established a significance threshold of 82 lb/day for ROG and NO_x on a quarterly basis (total ROG plus NO_x emissions are to remain below 164 lb/day). Diesel-powered equipment used during Project phases include construction equipment and heavy machinery, as described in Section 3.13. Daily construction emissions for these and other pollutants were calculated using CalEEMod, Version 2016.3.2, based on 24 months of construction (over four construction seasons). The CalEEMod model (output contained in **Appendix C**) uses EPA fugitive dust calculation methodologies as outlined in EPA AP-42 (Compilation of Air Emissions Factors).

As shown in **Table 7**, Project construction would result in maximum daily emissions of approximately 2.95 lb/day of ROG, 27.70 lb/day of NO_X, 18.99 lb/day of CO, 4.58 lb/day of total (dust and emission) PM_{10}, and 2.76 lb/day of total (dust and emission) $PM_{2.5}$. Thus, estimated emissions of ROG and NO_X are less than the AQMD construction significance thresholds. The AQMD has determined that if ROG and NO_x emissions are not deemed significant, then exhaust emissions of CO and PM_{10} from construction equipment and exhaust emissions from worker commute vehicles also would not be significant.

Table 7. Estimated Daily Construction Emissions for the Project (lb/day)

	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Project	2.95	27.70	18.99	4.58	2.76
AQMD Threshold	82	82	None	None	None
Significant?	No	No	No	No	No

Source: Cardno modeling using CalEEMod, Version 2016.3.2

The Project includes RPMs, as detailed in Sections 3.17.5, 3.17.7, and 3.17.11, to avoid and minimize the creation of fugitive dust. As discussed in Section 3.8.2.12, the Project will incorporate the applicable fugitive dust control measures. A Fugitive Dust Control Plan will be prepared that will incorporate the relevant BMPs established in AQMD Rules 223 and 223-1, including the measures shown in Appendix C-1 of the AQMD's Tables 1-3 of Rule 223-1, as appropriate. Potential impacts from fugitive dust would be reduced to a level of less than significant.

As detailed above, the Project would not violate the construction-generated emissions standards for ROG, NO_X, PM_{10}, or SO_2, or CO. The Project would not generate new vehicle trips and therefore would not result in increased air emissions following implementation. Emissions would be generated intermittently and temporarily during broadcast burning conducted for long-term management of the Project area; however, such emissions would be significantly lower and incomparable to emissions generated by an uncontrolled catastrophic wildland fire.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA IIIc. Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Standard of Significance. The AQMD has established methods for determining the significance of cumulative impacts (El Dorado County APCD 2002). A primary criterion for determining if a project has significant cumulative impacts is whether the project is consistent with an approved plan or mitigation program of district-wide or regional application in place for the pollutants emitted by the project. This criterion is applicable to both the construction and operation phases of a project.

ROG and NO_x. For projects in the Lake Tahoe Air Basin to be determined as not having a significant cumulative air quality impact, consistency with the applicable TRPA air quality plans and mitigation requirements must be shown, as set forth in the RPU, the RTP, and TRPA Code relating to air quality. As discussed under CEQA IIIa, the Project would be consistent with applicable regional and local plans. Thus, impacts from ROG and NO_x would not be cumulatively considerable and would be less than significant.

Other Pollutants. For other pollutants such as CO, PM_{10}, SO_2, NO_2, and toxic air contaminants (TACs), there is no applicable air quality plan. Accordingly, the AQMD applies the following pollutant-specific criteria for determining the significance of cumulative impacts:

1. **CO**: The Lake Tahoe Air Basin is in attainment for CO, and local CO concentrations are expected to decline even further in the future as more stringent CO standards for motor vehicles take effect. The AQMD does not consider CO to be an area-wide or regional pollutant that is likely to have cumulative effects. Accordingly, CO emissions for a project will ordinarily be considered not cumulatively significant as long as "project alone" emissions are not significant, and they are not.
2. **PM_{10}, SO_2, and NO_2**: The Lake Tahoe Air Basin is in non-attainment for the state 24-hour PM_{10} standard, which dictates the use of a relatively sensitive criterion for identifying cumulative effects on PM_{10} ambient concentrations. PM_{10} directly emitted from a project can have area-wide impacts and can be cumulatively significant even if not significant on a project-alone basis. The county is in attainment for the SO_2 and NO_2 ambient air quality standards, but SO_2 and NO_2 can also contribute to area-wide PM_{10} impacts through their transformation into sulfate and nitrate particulate aerosols. There is no approved regional plan for attainment of the PM_{10} standard, and there is no readily available model for predicting the combined ambient effects of directly emitted PM_{10}, SO_2, or NO_2 from individual projects. Accordingly, the AQMD applies alternative "de minimis" criteria, but these are relevant only to projects that are principally industrial or where most emissions are from stationary sources or that are principally development projects, or where the majority of the emissions of these pollutants is attributable to motor vehicle sources. Thus, these criteria are not applicable to the Project, which would only generate short-term construction emissions of PM_{10}, SO_2, and NO_2. With implementation of air quality RPMs outlined in Section 3.17.11, short-term impacts on emissions would be minimized during construction and would not have a cumulatively considerable impact.
3. **TACs**: Emissions of TACs are typically localized and not region-wide. Except in cases where there is information indicating the possible commingling of toxic pollutants from projects that are contiguous or nearby, the AQMD considers implementation of the "project alone" mitigation requirements and compliance with the applicable emission limits and mitigation measures required by EPA, CARB, AQMD rules and regulations, and local ordinances sufficient for a finding of not significant for cumulative impacts of TACs. The Project would comply with the applicable requirements, and the emission of TACs from this short-term construction Project would be less than significant. Project operations would not generate new vehicle trips or create new sources of long-term emissions.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA IIId. Would the Project expose sensitive receptors to substantial pollutant concentrations?

Standard of Significance. A sensitive receptor defines a location where human populations, especially children, seniors, and sick persons, are found with a reasonable expectation of continuous human exposure according to the averaging period for ambient air quality standards. A significant impact results from increases in CO that cause exceedance of NAAQS, CAAQS, and diesel particulate matter (DPM) (note that there is no quantitative threshold for DPM).

Sensitive receptors are facilities including schools, parks, playgrounds, nursing homes, hospitals, and residential dwellings where the public could be adversely affected by continued exposure to air emissions. The AQMD has determined that keeping total construction-phase fuel use under the limits shown in **Table 7** would result in no health risk from DPM (El Dorado County APCD 2002).

Timber management activities involve operating equipment that could temporarily produce dust and air emissions. Although the Project area contains no sensitive receptors, recreational users accessing Desolation Wilderness may pass in the vicinity of the Project area. The Project would not expose transient sensitive receptors to substantial or continual pollutant concentrations, and the level of impact would be less than significant

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA IIIe. Would the Project create objectionable odors affecting a substantial number of people?

Standard of Significance. A significant impact results if Project construction or operation creates objectionable odors affecting a substantial number of people.

Nuisance odors (e.g., combustive emissions from the use of diesel fuel in timber management equipment) may be noticeable to some individuals for short periods of time. Individuals most susceptible to Project odor emissions would include public passing by the Project area along SR 89 and recreational users accessing Desolation Wilderness. However, the transitory nature of these emissions would not produce substantial odor impacts on the public. Therefore, emissions from timber management would not create objectionable odors that would affect a substantial number of people.

The Project, once implemented, would not create odors outside of periods of prescribed burning. A Burn Plan will be prepared and reviewed by the LTBMU Fire Management Officer and the LTBMU Forest Supervisor. In addition to the Burn Plan, a Smoke Management Plan will be prepared, which is the basis for obtaining a Burn Permit from the AQMD. In order to minimize the effects of prescribed burning on air quality, monitoring, mitigation, and contingency measures will be identified in the Smoke Management Plan. Desirable meteorological conditions, such as favorable mixing layer and transport wind speeds, will be required in the Smoke Management Plan to facilitate venting and dispersion of smoke from populated areas. Potential air quality impacts related to odor would be reduced to a level of less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

8.0 BIOLOGICAL RESOURCES

This section evaluates the Project's potential impacts on biological resources during construction and operations. **Table 8** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 8. Biological Resources Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (CEQA IVa)	☐	☐	☒	☐
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? (CEQA IVb)	☐	☐	☒	☐
Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (CEQA IVc)	☐	☐	☒	☐
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? (CEQA IVd)	☐	☐	☒	☐
Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (CEQA IVe)	☐	☐	☐	☒
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (CEQA IVf)	☐	☐	☐	☒

8.1 CEQA Checklist Analysis

CEQA IVa. Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Standard of Significance. The loss of greater than zero endangered, threatened, or rare fish or wildlife individuals or disturbance of greater than zero acres of occupied or designated critical habitat constitutes a significant impact as defined by CEQA Article 5, Section 15065, California Endangered Species Act (CESA) Sections 2062 and 2067, CDFG Code Sections 1900-1913, and TRPA thresholds.

Special-status wildlife and fish species are species that have been afforded special recognition and protection by federal, state, or local resource conservation agencies and organizations. These species are generally considered rare, threatened, or endangered due to declining or limited populations. Special-status species include:

- Animals that are legally protected or proposed for protection under the CESA or Federal Endangered Species Act (FESA);
- Animals defined as endangered or rare under CESA;
- Animals designated as species of special concern by the CDFW;
- Animals designated as species of concern by the USFWS;
- Animals listed as "fully protected" in the Fish and Game Code of California (Sections 3511, 4700, 5050, and 5515);
- Animals designated as special interest species by the TRPA;
- Plants that are legally protected or proposed for protection under the CESA or FESA;
- Plants defined as endangered or rare under CESA;
- Plants designated as species of concern by the USFWS;
- Plants listed in the California Native Plant Society's Inventory of Rare and Endangered Plants of California (2019); and
- Plants designated as special interest species by the TRPA.

Forest Service Manual 2672.42 specifies that a biological evaluation (BE) and biological assessment (BA) be prepared to determine if a project may affect any Forest Service sensitive species and USFWS threatened, endangered, candidate, or proposed species and their designated or proposed critical habitat. The Project-level BA (LTBMU 2009a and 2009b, with supplemental addendums in 2010 and 2012) analyzed potential effects of the Project on terrestrial and aquatic wildlife, in compliance with NEPA. The purpose of the BA is to document activities in sufficient detail to determine how the Project may affect threatened, endangered, candidate, proposed, or sensitive species and their habitats (*U.S. Forest Service Manual 2670.5*). *U.S. Forest Service Manual 2672.4* directs the Forest Service to complete a BA for all Forest Service planned, funded, executed, or permitted programs and activities to evaluate possible effects on threatened, endangered, candidate, proposed, and Forest Service sensitive species. The objectives of a BA are:

- To ensure that Forest Service actions or funding of actions do not contribute to the loss of viability of any native or desired non-native plant or animal species;

- To ensure that Forest Service actions or funding of actions do not hasten the federal listing of any species; and
- To provide a process and standard through which threatened/endangered/candidate/ proposed/sensitive species under FESA receive full consideration through the planning process, thereby reducing negative impacts or species and enhancing opportunities for mitigation.

The NEPA BA found that the Project may either affect individuals, but was not likely to result in a trend toward federal listing or loss of viability for the listed species, or would not affect species, due to the lack of suitable habitat within or near the Project area. A detailed discussion of these findings can be found in **Appendix D**, and FESA species are discussed in more detail below.

8.1.1 Candidate, Sensitive, or Special-Status Species

Information on the potential presence of candidate, sensitive, or special-status species or their habitat in the vicinity of the Project area was obtained through a number of sources, including the USFWS, CDFW, and a biological survey of the Project area. **Appendix D** contains the biological resource data from CDFW and USFWS.

A request for a species list from the USFWS's Information for Planning and Conservation (IPaC) database for this Project was generated on November 5, 2018. The IPaC report provides a list of federal special-status species that may be present within El Dorado County and the Project area, as summarized in **Table 9**. A copy of the official species list is included in **Appendix D**.

A query was conducted of CDFW California Natural Diversity Database (CNDDB) using RareFind 5.2.14 on November 19, 2018, for California state-listed endangered, threatened, rare, candidate endangered, or candidate threatened species, within El Dorado County and the Project area. The CNDDB is an inventory of the status and locations of rare plants and animals in California, as managed and updated by CDFW. Due to the habitat and elevation range of the Project, species that are limited to the low-elevation, western portion of El Dorado County are not discussed further here, although a full query results are included in **Appendix D**. Relevant species are included in **Table 9**. The Forest Service Region 5 sensitive species (botanical and non-botanical) are addressed separately in the BA and Supplemental BA Memoranda for the 2013 NEPA Decision Memo for this Project, attached in **Appendix D**.

TRPA special interest species and sensitive plants are included in **Table 9**. Species in **Table 9** that potentially occur or have suitable habitat within or near the Project area are discussed and summarized in more detail below. Additional details and information related to the species discussed can be found in the BE/BA reports for this Project, attached in **Appendix D.**

Over the past decade, the Project area has been surveyed by Forest Service biological crews, Washoe Tribal members, and various contracted consultants for special-status plants, habitat composition, and noxious and invasive weeds. With the exception of cheatgrass (*Bromus tectorum*), no noxious or invasive weeds, as defined by El Dorado County Department of Agriculture (El Dorado County 2018), the Forest Plan, and the Lake Tahoe Basin Weed Coordinating Group (2018), were found within the Project area. The Forest Service will continue to monitor this species and conduct pre-Project surveys for new occurrences in portions of the Project area with a focus on temporary roads and landings prior to implementation. Infestations identified within the Project area or along travel routes associated with the Project area will be treated using approved methods, or flagged and avoided according to the species present and Project constraints. Staging areas (e.g., for equipment, materials, or crews) will not be located in weed-infested areas.

Table 9. USFWS FESA-listed and CDFW CESA Species Occurring in El Dorado County, Habitat Characteristics, and Potential to Occur in the Project Area

Species	Status	Habitat Characteristics	Potential to Occur, or Have Suitable Habitat, Within or Near the Project Area
Terrestrial and Aquatic Species			
Amphibians and Fish			
Lahontan cutthroat trout *Oncorhynchus clarkii henshawi*	USFWS ESA Federally Threatened	Lakes and streams of the Lahontan Basin.	Suitable habitat in the Project area; however, presence of non-native aquatic species and downstream migration barriers limit suitability.
Sierra Nevada yellow-legged frog *Rana sierrae*	USFWS ESA Federally Endangered; CA State Threatened	Ponds, tarns, lakes, and streams at moderate to high elevation.	No critical habitat in or near the Project area; no individuals observed within suitable habitat during surveys; presence of nonnative aquatic species limits suitability.
Birds			
Northern goshawk *Accipiter gentiles*	TRPA Special-Interest Species	Mature coniferous forests with open understory and dense canopy for roosting and nesting. Mature coniferous forest interspersed with open meadows for feeding.	Suitable habitat nearby.
Golden eagle *Aquila chrysaetos*	TRPA Special-Interest Species	Exposed cliffs within or in proximity of Project area.	No suitable habitat in or near the Project area.
Willow flycatcher *Empidonax traillii*	CA State Endangered Species	Nests in extensive montane willow thickets, 2,000-8,000 feet in elevation.	Potential to occur; Project area has suitable habitat.
Peregrine falcon *Falco peregrinus anatum*	TRPA Special-Interest Species	Exposed cliffs within or in proximity of Project area.	No suitable habitat in or near the Project area.
Bald eagle *Haliaeetus leucocephalus*	CA State Endangered Species; TRPA Special-Interest Species: nesting and wintering habitat	Coniferous and conifer/hardwood forests near large bodies of water.	Potential to occur; Project area has suitable habitat.
Osprey *Pandion haliaeetus*	TRPA Special-Interest Species	Near bodies of water. Suitable nest sites include poles, channel markers, and snags, often over open water.	Suitable habitat within the Project area.
Great gray owl *Strix nebulosi*	CA State Endangered Species	Mature forests with suitable nest sites. Low human disturbance.	Suitable habitat nearby; the Lake Tahoe Basin is outside of the current known range.
Waterfowl	TRPA Special-Interest Species	Near bodies of water.	Suitable habitat within the Project area.

Table 9. USFWS FESA-listed and CDFW CESA Species Occurring in El Dorado County, Habitat Characteristics, and Potential to Occur in the Project Area

Species	Status	Habitat Characteristics	Potential to Occur, or Have Suitable Habitat, Within or Near the Project Area
Mammals			
Deer	TRPA Special-Interest Species	Forests and meadows.	Suitable habitat within the Project area.
North American wolverine *Gulo gulo luscus*	USFWS ESA Federally Proposed Threatened; CA State Threatened Species	Montane conifer, subalpine conifer, alpine dwarf-shrub, wet meadow, and montane riparian habitats. Prefers areas with low human disturbance.	Project area has moderate levels of human disturbance and the Lake Tahoe Basin is outside of the current known range.
Fisher – West Coast DSP *Pekania pennanti*	CA State Threatened Species	Mature conifer forests.	The Lake Tahoe Basin is outside of the current known range.
Sierra Nevada red fox *Vulpes vulpes necator*	CA State Threatened Species	Conifer forests and alpine areas between 4,000-12,000 feet.	The Lake Tahoe Basin is outside of the current known range.
Botanical Species			
Tahoe yellow cress *Rorippa subumbellata*	CA State Endangered Species; TRPA Sensitive Plant	Endemic to the shorezone of Lake Tahoe, typically in back beach areas between 6,223 and 6,230 feet.	No suitable habitat in the Project area.
Tahoe draba *Draba asterophora* var. *asterophora*	TRPA Sensitive Plant	Rock crevices and open granite talus slopes on northeast slopes; 8,000-10,200 feet.	No suitable habitat in the Project area.
Long-petaled lewisia *Lewisia longipetala*	TRPA Sensitive Plant	North-facing slopes and ridge tops where snow banks persist throughout the summer; often found near snow bank margins in wet soils; 8,000-12,500 feet.	No suitable habitat in the Project area.
Cup Lake draba *Draba asterophora* var. *macrocarpa*	TRPA Sensitive Plant	Steep, gravelly or rocky slopes; 8,400-9,300 feet.	No suitable habitat in the Project area.
Galena Creek rockcress *Boechera rigidissima*	TRPA Sensitive Plant	Open, rocky areas along forest edges of conifer and/or aspen stands; usually found on north aspects; 7,500 feet and above.	No suitable habitat in the Project area.

Source: USFWS, CDFW, CNDDB, and TRPA

Marsh skullcap *(Scutellaria galericulata)*, a Forest Service special interest species, was identified in the Project area and will be monitored pre- and post-Project implementation. This is the only targeted rare plant species that was identified in the Project area. This species has a state rank of S2 (imperiled) and a California Rare Plant Rank of 2.2 (e.g., rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California). Project activities will be allowed to occur within this population, because this Project is expected to improve habitat for this species. Lamb et al. (2003) found that this species

increased in abundance at burn sites. They hypothesized the increased population was a result of increased light from removal of the canopy.

8.1.1.1 *Lahontan Cutthroat Trout (Oncorhynchus clarkii henshawi)*

Status: USFWS threatened species under ESA

LCT was listed as an endangered species in 1970 (Federal Register 1970). In 1975, under the ESA of 1973 as amended, LCT was reclassified as threatened to facilitate management and to allow for regulated angling (Federal Register 1973). In 1995, the USFWS released its recovery plan for LCT, encompassing six river basins within the LCT historical range, including the Truckee River basin. ESA-specific recovery targets related to downlisting (i.e., number of self-sustainable subpopulations) have yet to be determined for the basin.

Habitat Requirements and Species Occurrence

LCT habitat includes lakes and streams of the Lahontan basin, including the Truckee River basin and Lake Tahoe. LCT require spawning and nursery habitat characterized by cool water, pools in close proximity to cover and velocity breaks, well-vegetated and stable streambanks, and relatively silt free rocky substrate in riffle-run areas (USFWS 1995).

Non-native salmonids have displaced many LCT populations. Non-native fall spawning salmonids may have an advantage over spring spawning LCT, as altered watersheds provide poor habitat with conditions such as excessive turbidity, limited spawning gravel, and high flows in the spring. Nursery habitat in streams during the summer may also be impacted by increasing water temperatures and decreasing water levels.

Historically, LCT occurred throughout the Truckee River drainage from the headwaters downstream to Pyramid Lake. Regionally known as a valuable food source, LCT had been extirpated from the Lake Tahoe Basin by 1938. Recovery efforts have restored a reproducing population in the upper headwaters of the Upper Truckee River. LCT may be present in Lake Tahoe in very low densities due to past experimental stocking events in Lake Tahoe. However, recent stocking efforts by Nevada Department of Wildlife in Lake Tahoe have utilized rainbow trout (*Oncorhynchus mykiss*) broodstock (Nevada Department of Wildlife 2018). Although Meeks Creek, as a tributary to Lake Tahoe, may be considered suitable habitat for LCT, the widespread distribution of non-native salmonids both in the creek and in the lake may make their persistence unlikely at this point. The bridge at SR 89 over Meeks Creek serves as a migration barrier that prevents LCT from migrating from the lake to Meeks Creek through the meadow.

Direct, Indirect, and Cumulative Effects

Direct effects of the Project to individual LCT may include a reduction in stream canopy resulting from the removal of conifers. The presence of non-native salmonids, which are known to prey on young cutthroat trout and are known competitors (USFWS 1995) may impair the recolonization and persistence of LCT in otherwise physically suitable habitat. The SR 89 bridge, which serves as a migration barrier, also limits habitat suitability. Direct effects on suitable habitat are expected to be minor and temporary during conifer removal, as no broadcast burn ignitions will occur in WBBZs, and temporary waterbody crossings will be installed to prevent impacts to Meeks Creek and its tributaries. Indirect and cumulative effects of the Project are expected to improve LCT habitat through improving meadow and riparian habitat, groundwater levels, and stream baseflows.

Determination and Rationale

The Project would have a less-than-significant impact on LCT due to localized and temporary impacts on suitable habitat combined with low probability of species occurrence within the Project area.

8.1.1.2 *Sierra Nevada Yellow-legged Frog (Rana sierrae)*

Status: USFWS endangered species under ESA, with final designated critical habitat under ESA; CA state threatened species

SNYLF is an endangered species with critical habitat designated under the ESA. On April 25, 2013, the USFWS published a proposal in the Federal Register (Federal Register 2013) proposing listing SNYLF as endangered and designating critical habitat. On April 29, 2014, the final rule was published in the Federal Register designating the species as endangered (Federal Register 2014). On August 26, 2016, the final rule for critical habitat was published in the Federal Register (Federal Register 2016).

Habitat Requirements and Species Occurrence

SNYLF habitat includes ponds, tarns, lakes, and streams at moderate to high elevation. These frogs are highly aquatic, rarely venturing far from water. SNYLFs are well-adapted for existence at high altitudes, where weather and temperatures limit their seasonal and reproductive activity (Jennings and Hayes 1994). Frogs presumably winter in lake and stream substrata, and emerge after temperatures continuously remain above freezing. SNYLF visual encounter surveys were conducted within the Project area in 2013, 2016, 2017, and 2018, according to ESA requirements and Forest Service protocols. The section of Meeks Creek within the Project area is a low-gradient meadow channel exhibiting substantial deposition of fine/coarse sediments, large amounts of large woody debris blockages, and undercut banks. During the time of the 2018 surveys, the channel consisted of disconnected, isolated pools with large sections of dry channel bed. Non-native salmonids (brown trout) were observed in isolated pools. No SNYLF were observed during Project area surveys.

Direct, Indirect, and Cumulative Effects Analysis

Although there is suitable habitat within the Project area, no SNYLFs were observed during Project surveys. Intermittent creek flow and the presence of brown trout, which are known to prey on tadpoles (Knapp and Matthews 2000), impair habitat suitability. Direct effects on unoccupied suitable habitat are expected to be minor and temporary during conifer removal, as no broadcast burn ignitions will occur in WBBZs, and temporary waterbody crossings will be installed to prevent impacts to Meeks Creek and its tributaries. Indirect and cumulative effects of the Project are expected to improve SNYLF habitat through improving meadow and riparian habitat, groundwater levels, and stream baseflows.

Determination and Rationale

The Project would have a less than significant impact on SNYLF and its designated critical habitat because no critical habitat exists within the Project area, existing suitable habitat within the Project area is unoccupied, and predatory brown trout were observed in this section of Meeks Creek. Impacts to unoccupied suitable habitat will be temporary. Additional analysis and discussion related to SNYLF is included in the 2018 Supplemental BE/BA Memorandum for the 2013 Decision Memo for this Project, attached in **Appendix D.**

8.1.1.3 *Northern Goshawk (Accipter gentilis)*

Status: TRPA special-interest species

Habitat Requirements and Species Occurrence

Northern goshawks require mature conifer and deciduous forests with large trees, snags, downed logs, dense canopy cover, and open understories for nesting. Goshawk foraging habitat includes forests with dense to moderately open overstories and open understories interspersed with meadows, brush patches, riparian areas, or other natural and artificial openings. Structural characteristics of nesting habitat may vary across geographic regions. Typically, nest sites have greater canopy cover, greater basal area, greater number of large-diameter trees, low shrub/saplings/understory cover and numbers of small-diameter trees, and gentle to moderate slope relative to non-used random sites (Hall 1984; Hargis et al. 1994; Keane 1999). Goshawk

habitat in the Lake Tahoe Basin is typically limited to areas of low or no development, within limited human disturbance. The Project area and surrounding forest includes large trees that could potentially serve as nest sites and provide a closed canopy for protection from predator and thermal cover. Northern goshawks are year-round residents of the Lake Tahoe Basin, and are known to inhabit the forests of the west shore of Lake Tahoe, as documented by incidental detections and broadcast survey detections, between 0.3 to 0.6 mile from the Project area. The Forest Service has designated two Protected Activity Centers (PACs) near the Project area (as of 2009): one approximately 0.5 mile north of the Meeks Meadow (Upper General Creek PAC), and another approximately 1 mile south (Sierra Creek PAC). The Upper General Creek PAC is approximately 53 acres and the Sierra Creek PAC is approximately 200 acres. The Forest Service also designates Goshawk Threshold Zones for the basin, which define likely habitat areas. Nearest to the Project area, the northern Threshold Zone encompasses the Upper General Creek PAC and extends south toward the Project area, terminating approximately 250 feet from the Project area boundary. The southern Threshold Zone encompasses the Sierra Creek PAC and extends south, away from the Project area.

Direct, Indirect, and Cumulative Effects

Direct effects of the Project to northern goshawks may include short-term reduction in habitat quality and quantity during Project construction, due to disturbance along the Project area and removal of conifer trees. Larger, more suitable nesting trees are available in the near vicinity and less developed areas of the Meeks Creek watershed and surrounding vicinity, as documented by both adjacent PACs and Threshold Zones. Pre-implementation surveys will be conducted prior to construction to prevent and/or reduce direct impacts to northern goshawks. Trees with inhabitable nests will be flagged. Any goshawk detections or goshawk nest observations will be reported the LTBMU, and nest sites will be avoided as appropriately dictated by the Forest Service biologist. All spatial detection data will be shared with LTBMU. Disturbance effects are expected to be minor and temporary, and conifer and hazard tree removal is not expected to significantly alter the surrounding conifer habitat; therefore, no indirect or cumulative effects are expected.

Determination and Rationale

The Project would have a less-than-significant impact on northern goshawk due to localized and temporary impacts on suitable habitat combined with low probability of nesting occurrence within the Project area.

8.1.1.4 *Willow Flycatcher (Empidonax traillii)*

Status: CA State endangered species

Habitat Requirements

Willow flycatchers are habitat specific, utilizing wet meadows or, in some cases, riparian streams, with well-developed willow or other deciduous shrub elements. Willow flycatchers typically occupy meadows with structurally diverse willow cover (Bombay et al. 2003). The presence of water during the breeding season (May–September) appears to be an important habitat component (Fowler et al. 1991). Fowler et al. (1991) proposed 0.62 acre as the minimum size meadow usable by willow flycatchers. Willow flycatchers have also been found in riparian habitat of various types and sizes, ranging from small lakes or ponds surrounded by willows with a fringe of meadow or grassland to willow-lined streams, grasslands, or boggy area.

Direct, Indirect, and Cumulative Effects

The Meeks Meadow complex contains approximately 77 acres of willow flycatcher emphasis habitat (LTBMU 2012b). Surveys for willow flycatcher are conducted using *A Willow Flycatcher Survey Protocol for California* (Bombay et al. 2003). These surveys require at least two visits to each site in June and July, as outlined in the Project description RPMs (Section 3.17.8). The willow flycatcher population in the Lake Tahoe Basin is monitored annually by the Forest Service and its partner agencies. There are 18 known, historically occupied willow flycatcher sites within the basin. Seven of these have had attempted or successful nesting efforts. None of the nesting sites are within the proposed Project area. Willow flycatcher

surveys were conducted in willow habitat on the east end of the Meeks Meadow complex from 2003 to 2005 with no detections. In 2010 three separate detections occurred during non-Forest Service passerine surveys: two in the deciduous riparian habitat along the riparian corridor in the west end of the meadow and one in the mature willows at the east end of the meadow. Due to these detections, both areas were surveyed in 2011 but no detections were made.

Direct effects of the Project to individual willow flycatchers may include short-term reduction in habitat quality and quantity during Project construction, due to localized disturbance and presence of construction equipment. Disturbance effects are expected to be minor and temporary; therefore, no indirect or cumulative effects are expected, and Project outcomes are expected to improve habitat quality and increase habitat size along the riparian corridor. Conifer removal and increase in groundwater levels within the meadow will increase the suitable area available for willow distribution, and the riparian shrub community is expected to increase. Prior to Project implementation, surveys for willow flycatchers would be conducted to determine the locations of any active nests. If nests are found, they will be protected in accordance with the SNFPA (Forest Service 2004a), which prohibits thinning, prescribed fire, and restoration activities within suitable habitat surrounding the active nest sites between June 1 and August 31, as detailed in the biological RPMs (Section 3.17.8.)

Determination

The Project would have a less-than-significant impact on willow flycatcher due to localized and temporary impacts on suitable habitat, combined with Project description RPMs and the initiation of LOP should individual nesting sites be observed during pre-Project surveys. The Project is expected to improve and expand existing suitable habitat.

8.1.1.5 *Bald Eagle (Haliaeetus leucocephalus)*

Status: CA state endangered species; TRPA special-interest species: nesting and wintering habitat

Habitat Requirements

Bald eagle habitat includes coniferous and/or conifer/hardwood forest, near large bodies of water where they can typically find fish, their staple food. Bald eagles typical nest on the tops of large trees of snags (Buehler 2000). The nearest known nesting occurrence from the Project area was at Sugar Pine Point State Park in 2015, according to both CNDDB and TRPA data. The Project area is 1.3 miles south of TRPA's bald eagle nest buffer zone for this nesting site.

Direct, Indirect, and Cumulative Effects and Determination Rationale

Direct effects of the Project to bald eagles may include short-term reduction in habitat quality and quantity during Project construction, due to disturbance along the Project area and removal of conifer trees within the meadow area. However, adequate nesting and perching sites are available in the near vicinity, and the Project area includes the remainder of select conifer trees in upland areas of the meadow and provides for snag habitat through selectively girdled conifers. Disturbance effects are expected to be minor and temporary, and conifer removal within the meadow is not expected to significantly alter the surrounding conifer habitat; therefore, no indirect effects are expected. Cumulative effects of the Project are expected to improve bald eagle habitat through improving meadow habitat and suitable nest sites.

Determination

The Project would have a less-than-significant impact on bald eagle due to localized and temporary impacts on suitable habitat, and surrounding suitable habitat. The Project is expected to improve and expand existing suitable habitat.

8.1.1.6 *Osprey (Pandion haliaeetus)*

Status: TRPA special-interest species

Habitat Requirements

Osprey habitat includes open areas near bodies of water. Suitable nest sites include poles, channel markers, and dead trees (snags), often over open water. A previous osprey nest site was located near General Creek, approximately 0.5 mile north of the Project area (in the same general areas as the goshawk PAC). TRPA has designated a 0.25-mile buffer around the nest site, which is outside this Project area.

Direct, Indirect, and Cumulative Effects and Determination Rationale

Direct effects of the Project to osprey may include short-term reduction in habitat quality and quantity during Project construction, due to disturbance along the Project area and removal of conifer trees within the meadow area. However, suitable nesting sites are limited in the meadow, due to limited snags and lack of open water. The Project description specifies increasing suitable nesting sites through selectively girdled conifers to create snags. Disturbance effects are expected to be minor and temporary. Cumulative effects of the Project are expected to improve osprey habitat through improving meadow habitat and suitable nest sites.

Determination

The Project would have a less-than-significant impact on osprey due to localized and temporary impacts on suitable habitat and surrounding suitable habitat. The Project is expected to improve and expand existing suitable habitat.

8.1.1.7 *Great Gray Owl (Strix nebulosi)*

Status: CA State endangered species

Habitat Requirements

Great grey owls tend to avoid areas with people. Their habitat includes dense conifer forest with small openings and meadows nearby. They tend to perch on the edges of meadows or forest openings, and use meadows for hunting during dawn, dusk, and at night. The Lake Tahoe Basin is outside of their known range.

Direct, Indirect, and Cumulative Effects and Determination Rationale

Direct effects of the Project to great grey owls may include short-term reduction in habitat quality and quantity during Project construction; however, as the Lake Tahoe Basin is outside the known great grey owl habitat, no direct or indirect effects are expected. Cumulative effects of the Project are expected to improve overall wildlife habitat through improving meadow habitat and groundwater levels.

Determination

The Project would have a less-than-significant impact on great grey owl due to localized and temporary impacts on suitable habitat, and because existing suitable habitat within the Project area is unoccupied.

8.1.1.8 *Waterfowl*

Status: TRPA special-interest species

Habitat Requirements

Suitable habitat for waterfowl include natural habitats near bodies of water, including lakes, streams, meadows, and marshes. The Project area includes suitable habitat.

Direct, Indirect, and Cumulative Effects and Determination Rationale

Direct and indirect effects of the Project to waterfowl may include short-term reduction in habitat quality and quantity during Project construction, due to disturbance along the Project area. Disturbance effects are expected to be minor and temporary. Cumulative effects of the Project are expected to improve waterfowl habitat through improving meadow and riparian habitat, groundwater levels, and stream baseflows.

Determination

The Project would have a less-than-significant impact on waterfowl due to localized and temporary impacts on suitable habitat and surrounding suitable habitat. The Project is expected to improve and expand existing suitable habitat.

8.1.1.9 *Deer*

Status: TRPA special-interest species

Habitat Requirements

The mule deer population in the Lake Tahoe Basin is not monitored; therefore, it is not known if there are mule deer within the Project area. There are two herds that reside in the Lake Tahoe Basin: the Truckee-Loyalton herd in the northern portion and the Carson herd in the southern portion. In this region, young are born in June and July and remain dependent on the mother for approximately 8 to 10 months. According to the Forest Service mule deer habitat model (2004b) there is 32,266.5 acres of high-quality fawning habitat in the basin and less than 1 acre in the Project area.

Direct, Indirect, and Cumulative Effects and Determination Rationale

Direct and indirect effects of the Project to deer may include short-term reduction in habitat quality and quantity during Project construction, due to disturbance along the Project area. Disturbance effects are expected to be minor and temporary. Cumulative effects of the Project are expected to improve deer fawning habitat through improving meadow and riparian habitat, improving browse quantity, and providing improved cover.

Determination

The Project would have a less-than-significant impact on deer due to localized and temporary impacts on suitable habitat, and limited amount of suitable fawning habitat in the Project area. The Project is expected to improve and expand existing suitable habitat.

8.1.1.10 *Wolverine (Gulo gulo luscus)*

Status: USFWS proposed threatened species under ESA; CA State threatened species

Habitat Requirements

North American wolverine habitat includes montane conifer, subalpine conifer, alpine dwarf-shrub, wet meadow, and montane riparian habitat. Wolverines prefers areas with low human disturbance. The Project area has suitable habitat, although moderate levels of human disturbance limit suitability. The Lake Tahoe Basin is outside of the current known range.

Direct, Indirect, and Cumulative Effects

Direct and indirect effects of the Project to wolverine may include short-term reduction in habitat quality and quantity during Project construction, although the Lake Tahoe Basin is currently outside the wolverine known range. Therefore, no direct or indirect effects are expected. Cumulative effects of the Project are expected to improve overall wildlife habitat through improving meadow habitat and groundwater levels.

Determination

The Project would have a less–than-significant impact on wolverine due to localized and temporary impacts on suitable habitat, and because existing suitable habitat within the Project area is unoccupied, as the Lake Tahoe Basin is outside the North American wolverine known range.

8.1.1.11 *Fisher (Pekania pennanti)*

Status: CA State threatened species

Habitat Requirements

Fisher habitat includes mature conifer forests comprised of intermediate to large conifer trees and deciduous-riparian areas with high percent canopy closure. Fishers use cavities, snags, logs, and rocky areas for cover and denning. They require large areas of mature, dense forest for sufficient habitat. A fisher was observed in 1984 near the Project area, between Sugar Pine Point and Meeks Bay, as noted in occurrence details of the CNDDB. Fishers are now presumed to be extant from the Lake Tahoe Basin.

Direct, Indirect, and Cumulative Effects

Historical sightings of fisher in the Lake Tahoe Basin indicate previous suitable habitat, although the Lake Tahoe Basin is currently outside the fisher's known range, and the fisher is presumed extant within the basin. Therefore, no direct or indirect effects are expected. Cumulative effects of the Project are expected to improve overall wildlife habitat through improving meadow habitat and groundwater levels.

Determination

The Project would have a less-than-significant impact on fisher due to localized and temporary impacts on suitable habitat, and because existing suitable habitat within the Project area is unoccupied, as the Lake Tahoe Basin is outside the fisher's known range.

8.1.1.12 *Sierra Nevada red fox (Vulpes vulpes necator)*

Status: CA State threatened species

Habitat Requirements

Sierra Nevada red fox habitat includes pine and fir conifer forests and alpine landscapes between 4,000 and 12,000 feet in elevation. The Project area has suitable habitat nearby, although the Lake Tahoe Basin is outside of the current known range.

Direct, Indirect, and Cumulative Effects

Direct and indirect effects of the Project to Sierra Nevada red fox may include short-term reduction in habitat quality and quantity during Project construction, although the Lake Tahoe Basin is currently outside the red fox known range. Therefore, no direct or indirect effects are expected. Cumulative effects of the Project are expected to improve overall wildlife habitat through improving meadow habitat and groundwater levels.

Determination

The Project would have a less-than-significant impact on Sierra Nevada red fox due to localized and temporary impacts on suitable habitat, and because existing suitable habitat within the Project area is unoccupied, as the Lake Tahoe Basin is outside the Sierra Nevada red fox known range.

Potential impacts to the species addressed above are reduced to less than significant through compliance with local, state, and federal laws and protection programs and through implementation of biological RPMs detailed in Sections 3.17.8, 3.17.9, and 3.17.10. The Project would not result in the loss of greater than zero endangered, threatened, or rare fish or wildlife individuals or disturbance of greater than zero acres of occupied or designated critical habitat.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

8.1.2 Avian Species

Conifer thinning and removal will be conducted when operable soil conditions exist, which is typically between May and October, and thus would overlap with bird nesting season. Noise and human presence

associated with construction-related activities would have the potential to directly and indirectly affect any adjacent nests present through nest failure or abandonment. Tree removal would potentially affect nesting birds through loss of nesting habitat. Such birds are protected under the MBTA and those species associated with the Project area habitat, as identified by USFWS, and many of which are discussed in more detail above, would include the following (**Appendix D**):

- Bald eagle (*Haliaeetus leucocephalus*) – Breeds January 1 to August 31
- California spotted owl (*Strix occidentalis occidentalis*) – Breeds March 10 to June 15
- Cassin's finch (*Carpodacus cassinii*) – Breeds May 15 to July 15
- Golden eagle (*Aquila chrysaetos*) – Breeds December 1 to August 31
- Olive-sided flycatcher (*Contopus cooperi)* – Breeds May 20 to August 31
- Rufous hummingbird (*selasphorus rufus)* – Breeds elsewhere
- Williamson's sapsucker *(Sphyrapicus thyroideus)* – Breeds May 1 to July 31
- Willow flycatcher (*Empidonax traillii)* – Breeds May 20 to August 31

The willow flycatcher is a Forest Service sensitive species, USFWS species of concern, and State of California endangered species. Temporary direct or indirect impacts to willow flycatcher individuals may be significant due to its listing status if suitable habitat in the Project area is occupied, although cumulative effects of the Project would improve and expand suitable habitat. Although willows and riparian vegetation will not be removed, noise and human presence associated with timber management activities would have the potential to directly and indirectly affect any adjacent nests present through nest failure or abandonment. The Project is required to implement regulatory measures associated with impacts to this special-status species:

> *For construction activities proposed to occur during the nesting season (i.e., March 15 through August 15), the Forest Service will review the Project area, including a 100-foot buffer around the Project area, to identify any willow flycatcher and MBTA protected migratory bird nest sites that may be present. The preconstruction nest survey will occur no more than 14 days prior to Project mobilization. If a nest is present in the immediate vicinity, a qualified biological monitor will be contacted to evaluate whether any migratory birds are impacted by the Project. The biological monitor will have the authority to stop construction near occupied sites if construction activities appear to be having a negative or adverse impact on nesting migratory birds or their young. If construction must be stopped, the biological monitor must consult with USFWS and CDFW staff within 24 hours to determine appropriate actions to restart construction while reducing impacts to identified migratory bird nests.*

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA IVb. Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

Standard of Significance. A direct or indirect impact greater than zero acres for state or federal sensitive natural communities or direct or indirect impact greater than zero acres to SEZ including riparian habitat constitutes a significant impact per TRPA Code Section 61.3.

Sensitive Natural Communities. The Project impacts no listed sensitive natural communities because the Project area contains no such communities. Database searches covering the Project area include the CDFW's CNDDB (**Appendix D**, dated November 19, 2018) and USFWS's IPaC database (**Appendix D**, dated November 5, 2018) for El Dorado County.

The USFWS identifies no critical habitat within the Project area.

TRPA designates uncommon plant communities in TRPA Code Section 61.3.6.C, which are as follows: the deepwater plants of Lake Tahoe, Grass Lake (sphagnum fen), Osgood Swamp, Hell Hole (sphagnum fen), Pope Marsh, Taylor Creek Marsh, Upper Truckee Marsh, and the Freel Peak cushion plant community. These communities lie outside of and are distant from the Project area.

Stream Environmental Zones. The Project contains SEZs, which is a term unique to the Lake Tahoe region. TRPA Code Chapter 90, Definitions, defines an SEZ as "Generally an area that owes its biological and physical characteristics to the presence of surface or ground water." SEZs provide a variety of environmental services, including water quality maintenance, flood attenuation, infiltration and groundwater recharge, wildlife habitat, and scenic and recreation enjoyment, among others. SEZs are recognized by TRPA's LCD system as Class 1b. LCDs 1a, 1b, 1c, and 2 are not generally suited for urbanization or intensive forestry use, but can be considered for open space, conservation areas, and low-intensity recreation.

TRPA maintains the RPU elements that establish SEZs as sensitive natural communities protected by standards and regulations. Lahontan Water Board also maintains standards in the Lahontan Basin Plan related to activities in SEZ. The Project implements restoration across up to 300 acres of the Meeks Meadow complex to restore natural fire disturbance regime and to enhance riparian habitat for native riparian dependent species, increase meadow acreage, improve plant diversity and vigor, provide habitat for native species, increase water availability for wetland species, and provide wetter conditions for a longer duration each year. **Figure 4** shows the SEZ boundary within the Project area.

Temporary impacts to SEZs during timber management activities are reduced through implementation of the RPMs as described in Section 3.17.2. The resulting Project would be beneficial in the long term because the SEZ acreage would be increased and SEZ functions would be improved and restored. Restoration of SEZs is important to the water quality and habitat around Lake Tahoe, since SEZs provide for sediment trapping, nutrient uptake, carbon sequestration, aquatic and terrestrial habitat, wildlife feeding and nesting areas, flood storage and desynchronization, and open space. The Project will not result in the loss of any acres of SEZ.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA IVc. Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Standard of Significance. Greater than zero acres and/or zero linear feet of disturbance or discharge to wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrologic interruption, or other means constitutes a significant impact as defined by the USACE jurisdictional waters regulations, 404 CFR 230 Section 404(b)(1), CDFG Section 1600 et seq., and EPA and State of California no net loss policies.

Figure 5 provides locations of protected waters of the U.S. in the Project area. The Project includes no actions that would result in direct removal, filling, or hydrological interruption of federally protected

wetlands. Disturbance associated with construction of temporary roads and landings would be outside of TRPA SEZs and federal-protected wetlands. Timber management activities for the removal of conifers would not create a substantial adverse effect, because compliance with the 2014 Timber Waiver conditions and the RPMs detailed in Section 3.17.2 would avoid and reduce potential impacts to wetlands to a level of less than significant.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None.**

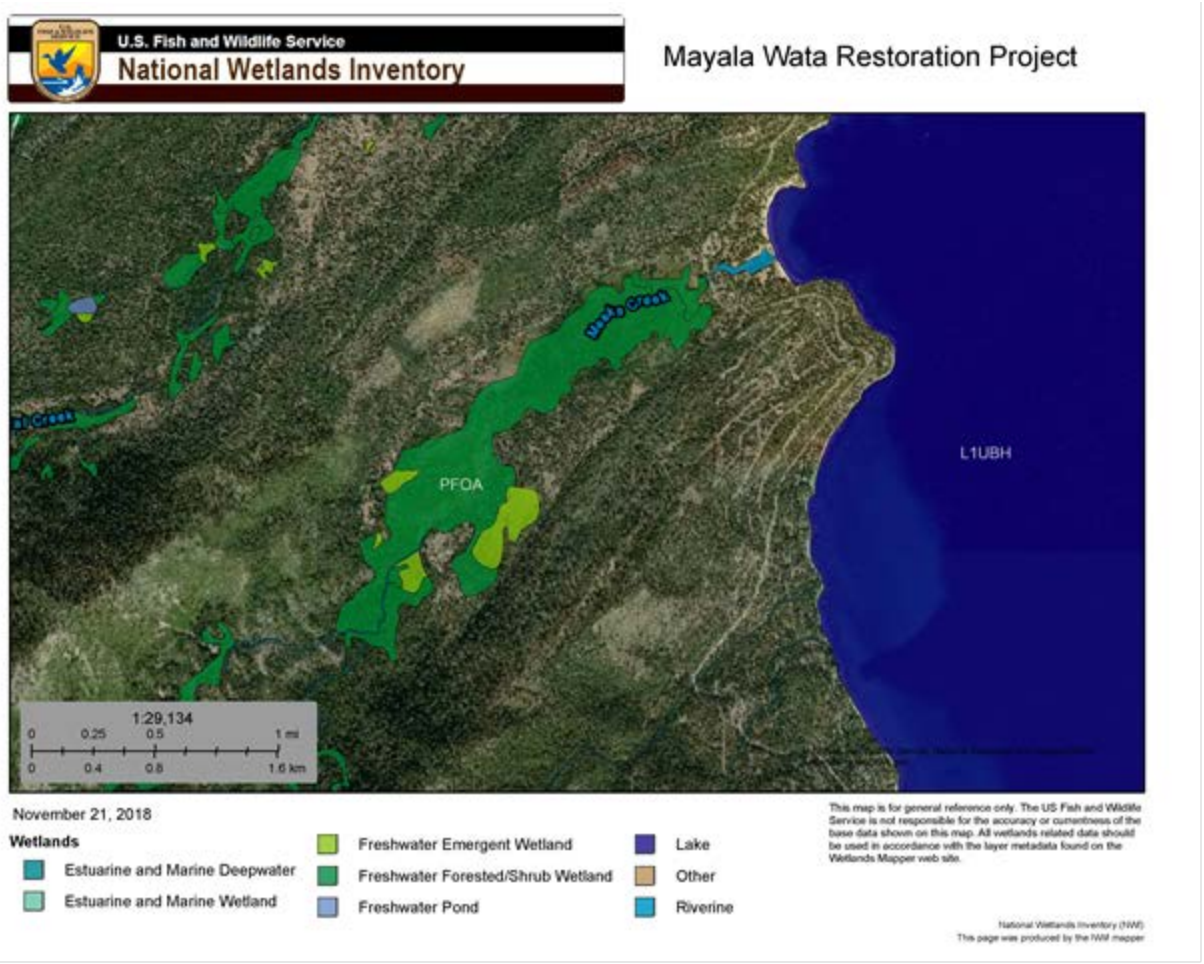

Figure 5 Potential Waters of the U.S. within the Project Area.

CEQA IVd. Would the Project 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?

Standard of Significance. A significant impact results from the blockage, disruption, or impedance of use of greater than zero wildlife or fish corridors or native wildlife nursery sites, as defined by TRPA Code Chapters 62 and 63.

As discussed in the analysis for CEQA IVa, removal of conifer species would have potential to impact avian species, including migratory birds. There were no other potential wildlife corridors identified within the Project area.

Construction is expected to take place from May to August and thus would occur during the bird nesting season. Noise and human presence associated with construction-related activities would have the potential to directly and indirectly affect any adjacent nests present through nest failure or abandonment. Tree removal also would be necessary, which further would affect nesting birds through loss of habitat. Although these impacts could be significant because these birds are protected under the MBTA, the Project would avoid effects to species protected under the MBTA through implementation of biological RPMs that are detailed in Section 3.17.8 of the Project description.

If during pre-Project surveys, special-status wildlife species with agency-mandated PACs and LOPs are found breeding in the Project area, a Forest Service biologist would implement appropriate LOPs around the PAC. Nests of species covered by the MBTA would be protected in place via a 100-foot construction buffer until the young fledge. As a result, the Project's potential impact to MBTA-protected species and willow flycatcher nursery sites would be reduced to a level of less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None**.

CEQA IVe. Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Standard of Significance. If the Project conflicts with goals and policies outlined in the conservation element of the TRPA RPU for vegetation, wildlife, and/or fisheries, a significant impact to biological resources results.

The Project implements a TRPA EIP Project that has been approved through EIP Project Permit EIPC2018-0012, for the attainment of TRPA environmental thresholds. As a result the Project would not conflict with goals and policies outlined in the conservation element of the TRPA RPU for vegetation, wildlife, or fisheries.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA IVf. Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Standard of Significance. If the Project conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved habitat conservation plan, a significant impact results.

The Project does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan because no such plans exist for the Project area. Thus, no impact would result.

Environmental Analysis: **No Impact.**

Required Mitigation: **None**.

9.0 CULTURAL RESOURCES

This section addresses the cultural resources criteria in the CEQA Guidelines. **Table 10** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 10. Cultural Resources Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? (CEQA Va)	☐	☐	☒	☐
Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (CEQA Vb)	☐	☐	☒	☐
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (CEQA Vc)	☐	☐	☒	☐
Disturb any human remains, including those interred outside of formal cemeteries? (CEQA Vd)	☐	☐	☒	☐

9.1 CEQA Checklist Analysis

CEQA Va and CEQA Vb. Would the Project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, or cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Standard of Significance. If the Project adversely affects important examples of major periods of California history or pre-history, a significant impact results to historical resources. Impacts to eligible or potentially eligible resources include those resulting from construction, operation, or maintenance activities that adversely impact the integrity of prehistoric or historic archaeological resources and are unavoidable based on the Project location. If the Project causes "a substantial adverse change in the significance of an historical or archaeological resource" (i.e., physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings) pursuant to PRC Section 15064.5, a significant impact results to archaeological resources.

NHPA Section 106 consultation was conducted by Forest Service Heritage Program specialists in accordance with the provisions of the Programmatic Agreement stipulation 7.4(b) (refer to Section 2.8.1.1). **Appendix E** contains the LTBMU heritage resource specialist's consultation letter dated July 1, 2009. There are cultural resource sites that have been recorded in the Project area's Area of Potential Effects (APE): historic can scatters; a larger scatter of historic and non-historic trash and rubble; two standing cabins, a collapsed outhouse, a shed, and a possible third cabin; and a historic trash dump.

The Project will avoid historic properties. Avoidance means that no activities may affect historic properties, unless specifically identified in the Programmatic Agreement. These recorded sites will be flagged and

avoided by Project activities and locations. Boundary flagging will be communicated to the appropriate Forest Service administrators and specialists responsible for Project implementation so that pertinent importation will be incorporated into implementation planning, documentation, and contracting.

The possibility for timber management activities to expose previously undiscovered resources still remains. Implementation of the cultural RPMs that are detailed in Section 3.17.14 and the ongoing involvement of the Washoe Tribe, which will include on-site monitoring during site preparation and Project implementation, would allow for the timely response to the identification of unanticipated or inadvertent impacts to historical resources and reduces potential impacts to unknown historical resources to a level of less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None**.

CEQA Vc. Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Standard of Significance. A significant effect on the environment occurs if the Project has the potential to pose a significant impact to paleontological resources identified during construction-related ground-disturbing activities, if any paleontological resources are identified during construction, as provided in PRC Section 5097.98, or if the Project directly or indirectly destroys a unique paleontological resource or site or unique geologic feature. The significance of paleontological resources is determined in part by compliance with the Antiquities Act of 1906. Fossil remains of vertebrates are considered significant resources.

The Project area contains no unique geologic features. To determine if any potentially significant paleontological resources are located within or near the Project site, a detailed search of the University of California Museum of Paleontology (UCMP) online collections and specimen database was conducted.

The UCMP files contain information on documented paleontological finds and locational data. According to the UCMP records search, no floral or paleontological remains have been found within or immediately adjacent to the Project area. In general, most areas of El Dorado County are not highly sensitive for paleontological resources with several notable exceptions. These include Hawver Cave and the "Cool Quarry" near the town of Cool, and Crystal Cave in the Sierra Nevada foothills near Placerville. The UCMP collections contain several specimens that were collected in the Lake Tahoe Basin in the nineteenth century (UCMP 2018). These include a single Glabrum (a species of small deciduous tree) leaf (Seward 1898) and three examples of gastropods recovered from the Lake Tahoe area (no refined locational data are available). These consist of two examples of *Helix whitneyi* (a species of land snail) and a single example of *Hyaline breweri* (also a land snail) (Turgeon et al. 1998).

Regardless of the specific locations of the Lake Tahoe Basin paleontological finds documented in the UCMP database, the Glabrum leaf and gastropods are common fossil species, and there are no indications that significant deposits of these or other fossils are present in or near the Project area. Additionally, Project implementation will have limited ground disturbance and no excavation will occur, which will limit the potential to discover buried resources. However, in the event previously unknown paleontological resources are encountered during construction, implementation of the cultural RPMs that are detailed in Section 3.17.14, along with the continual involvement of and on-site monitoring by the Washoe Tribe, would reduce potential impacts paleontological resources to a level of less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None**.

CEQA Vd. Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Standard of Significance. The potential exists to pose a significant impact to human remains identified during construction-related ground-disturbing activities. A significant impact results if the Project affects human remains.

There are no known cemetery or burial areas within the Project area; however, there is a potential for inadvertent discoveries of human remains during implementation. Project implementation will create limited ground disturbance and requires no excavations, which will limit the potential to discover unknown cemetery or burial sites. The Project would avoid potential impacts to human remains through compliance with PRC Section 5097.98 and Section 7050.5 of California Health and Safety Code, and implementation of the cultural RPMs (detailed in Section 3.17.14), which require that if remains are found, a cultural resources specialist would be contacted to provide an initial evaluation of the remains. If the remains are found to be human or potentially human, the El Dorado County Sheriff/Coroner shall be notified within 24 hours of the discovery to conduct proper evaluation and treatment of remains. If the sheriff/coroner determines the remains to be of early Native American origin, the NAHC must be contacted. The NAHC will assign a Most Likely Descendent to the Project who, in collaboration with the Washoe Tribe and any landowner(s), will determine the ultimate treatment and disposition of the remains.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None**.

10.0 GEOLOGY AND SOILS

This section evaluates the Project's impacts on geological and soil resources during construction and operations. **Table 11** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 11. Geology and Soils Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides? (CEQA VIa)	☐	☐	☒	☐
Result in substantial soil erosion or the loss of topsoil? (CEQA VIb)	☐	☐	☒	☐
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? (CEQA VIc)	☐	☐	☒	☐
Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (CEQA VId)	☐	☐	☒	☐
Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? (CEQA VIe)	☐	☐	☐	☒

10.1 CEQA Checklist Analysis

CEQA VIa. Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides?

Standard of Significance. For CEQA VIa-i through VIa-iv, the location of facilities within an Alquist-Priolo earthquake fault zone or known active fault zone or the location of facilities within areas of unstable soil without appropriate design features or construction controls constitutes a significant impact.

Potential geologic hazards within and in the vicinity of the Project area have been assessed in accordance with the requirements of the California Board for Geologists and Geophysicists (Board) *Geologic Guidelines for Earthquake and/or Fault Hazard Reports*; the Board *Guidelines for Engineering Geologic Reports*; California Geological Survey Special Publication 42, *Fault-Rupture Hazard Zones in California*: *Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zone Maps* (Hart and Bryant 1997); and California Geological Survey Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California* (California Division of Mines and Geology 1997).

The Project area is located in Uniform Building Code Seismic Hazard Zone 3. Potential geologic hazards for the Project area would include proximity to potentially active faults and liquefaction resulting from subsurface soil conditions. Project area conditions do not contribute to increased risk from debris flows, flooding, rock fall, or avalanche. A common effect of earthquakes that could occur in the Project area is ground shaking along a fault.

The most significant geologic hazards associated with the Project area are from earthquakes and their associated effects. Earthquakes present direct (primary) and indirect (secondary) hazards, both of which can occur locally or at locations distant from the earthquake source. Direct, local earthquake hazards include damage caused by fault displacements either by ground surface rupture or gradual fault creep. The damage caused by ground shaking is also a direct effect; however, shaking can occur locally or at remote locations. Indirect hazards presented by earthquakes include liquefaction and earthquake-induced landslides, both of which are triggered by ground shaking. The portions of the Project area that are located near steep terrain could be subject to slope instability (e.g., landsliding, either gravitational or earthquake-induced) hazards, but slopes within the Project area are less than 30 percent and for the most part the Project area is flat. The analysis of these hazards is based on an understanding of the potential for these events to occur in the Project area, noting however, that the Project constructs no permanent structures.

The Project area is not traversed by faults identified by the California Geological Survey as active (i.e., identified under the Alquist-Priolo Earthquake Fault Zoning Act). Data have been obtained from the California Geological Survey and compared against the Project boundaries. Project design has incorporated review of topography, soils, and suitability of materials to ensure safety and risk of loss based on the soils and type of improvements. Implementation of the Project would not increase the exposure of structures or people to soil instability. The Project would not involve construction of homes or other building structures for human habitation that would expose people to risk of loss, injury, or death from earthquake faults, ground shaking, liquefaction, or landslides during strong seismic shaking events.

Fault Rupture. The Project area is located within the Sierra Nevada-Great Basin seismic belt. Based on the Division of Mines and Geology Special Publication 42 and the *Index to Official Maps of Earthquake Fault Zones* (Hart and Bryant 1997), the Project area is not located in the Alquist-Priolo Earthquake Fault Zone.

The risk of fault rupture is a less-than-significant impact based on existing published data of officially recognized faults and proximity of the Project area to such faults. The Project would not increase the present surface rupture hazard nor construct habitable structures in these areas. Through conformance with federal,

regional, state, and local codes and requirements, design specifications, and construction controls, the potential impact from fault rupture is avoided, minimized, and reduced to a level of less than significant.

Strong Seismic Groundshaking. The Project area is located in a region traditionally characterized by moderate seismic activity. A large earthquake in the Project area vicinity could cause moderate to high ground shaking in the Project area. Anticipated ground acceleration at the Project area is great enough to cause structural damage.

The Project would construct no occupied structures and thus exposes no new occupants to ground shaking or injury resulting from seismically induced structural damage. Through conformance to federal, regional, state, and local codes and requirements, design specifications, and construction controls, the potential impact from ground shaking is avoided, minimized, and reduced to a level of less than significant

Seismic-related Ground Failure, including Liquefaction. Review of available literature and Project area soil maps indicates that the sandy soils below the groundwater table are dense in nature and thus not as susceptible to liquefaction. Liquefaction associated with earthquake activity is not likely to occur within the majority of the Project area due to the high rock content of the soils. With such high rock content, the saturation levels of the soils do not reach a state of liquefaction readily. Potential impacts related to liquefaction would be less than significant.

Landslides. The possibility of landslides and seismically induced slope instability is considered low because of the topography within and adjacent to the Project area. The impact level is less than significant because implementation and operation of the Project would not increase the potential for landslides or seismically induced slope instability.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA VIb. Would the Project result in substantial soil erosion or the loss of topsoil?

Standard of Significance. Significant impacts result from non-compliance with TRPA Code Chapters 30, 33, and 60 and the *208 Water Quality Plan* requirements for the control of erosion on- and off-site and the stabilization of soils during and upon completion of excavation, grading, and fill activities.

Short-term Construction. Site preparation and construction of temporary landings and roads will result in soil disturbance. The Project area is generally flat and has a low erosion risk. A Forest Service watershed or transportation specialist will review Project BMPs prior to a large storm event (1 inch or greater) that may exceed BMP capacity and will notify the contract administrator if additional BMPs are recommended to disconnect runoff from surface water features. To minimize soil compaction, gullying, and rutting, ground-based equipment operations would be conducted only when soils are dry to moist. This determination would be made by a Forest Service watershed specialist or contract administrator, using the "rut standard" specified in the 2014 Timber Waiver. Soil disturbance will be minimized through the use of low psi equipment and by further limiting mechanical work in SEZs to times when soils are operable as defined in Attachment A of the 2014 Timber Waiver.

Temporary landings and roads will be established in areas that are classified as uplands. Existing roads and trails will be utilized as fire lines to minimize new ground disturbance. The Project includes RPMs to minimize and control erosion on- and off-site and to stabilize soils during and upon completion of ground-disturbing activities. Temporary roads will be out sloped when feasible or other drainage structures installed to ensure for proper drainage and will not be overwintered, when possible. Temporary roads will be obliterated and returned to original site conditions. Temporary road segments would be subsoiled to a 12-inch depth, seeded using a culturally significant, native seed mix, and mulched with native meadow

mowings. Temporary Class III waterbody crossings will be removed and natural drainage patterns will be re-established.

Roads will be watered for dust abatement according to *Forest Service Handbook 2409.15*. Determination of dust abatement will be made by the contract administrator. Dust abatement will be performed to control road surface loss, provide for road user safety, and minimize nuisance dust impacts to adjacent resources and neighborhoods. Construction will occur between May 1 and October 15 to the maximum extent possible. If grading or movement of soil becomes necessary between October 16 and April 30, a standard grading exception request will be submitted to TRPA.

Long-term Operation. Long-term management of the Project area, which will be monitored, and response to the success of the stabilization and revegetation of the landings and temporary roads along with the restoration of the larger meadow complex would not result in substantial soil erosion or the loss of topsoil.

This evaluation concludes that the Project includes site-specific RPMs, as detailed in Sections 3.17.2 through3.17.7, that are appropriate and adequate to minimize erosion on- and off-site and stabilize soils during and upon completion of soil-disturbing activities. The Project will conform to federal, regional, state, and local codified regulations for the control of soil erosion, thereby reducing potential impacts to a level of less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None**.

CEQA VIc. Would the Project 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?

Standards of Significance. The location of new structures of facilities within areas subject to unstable soil conditions resulting from grading, excavation, or fill constitutes a significant impact. Refer to the analysis for CEQA VIa, which analyzes the potential for landslides, lateral spreading, and liquefaction and determines the level of impact would be less than significant.

Liquefaction occurs in water-saturated sediments that are shaken by moderate to large earthquakes. Liquefaction hazard analysis involves understanding the potential for ground shaking combined with the physical properties and conditions of the soil. Soils most susceptible to liquefaction are saturated, loose, clean, uniformly graded, and fine-grained sand deposits. Geologic age also influences the potential for liquefaction. Sediments deposited within the past few thousand years are generally much more susceptible to liquefaction than older Holocene-age sediments; Pleistocene-age sediments, which are between 12,000 and 2.5 million years old, are even more resistant, and pre-Pleistocene-age sediments (more than 2.5 million years old) are generally immune to liquefaction (California Division of Mines and Geology 1997). The Project area is mapped as Qlt (Quaternary Lacustrine terrace deposits [Pleistocene]) and consists of poorly to moderately sorted silt, sand, and gravel forming broad low terraces 5 to 10 meters above lake level, which locally includes delta deposits (Saucedo 2005). The liquefaction potential within the Project area is low.

Landslides and debris flows triggered by earthquake ground shaking have historically been the cause for a great deal of property damage and loss of life. Areas most susceptible to earthquake-induced landslides are generally on steep slopes or adjacent to existing landslide deposits. The possibility of landslides and seismically induced slope instability is considered low due to topography within and upslope of the Project area. Due to the characteristics of the underlying geology, soils, and the fact that no structures for habitation or public gatherings are proposed for construction, impacts related to landslide risk are considered less than significant.

Moderate or large avalanches can generate enough force to destroy most human-made objects and structures. Restricting the intensity of development in areas of high avalanche potential reduces the possibility of loss of life and property. Therefore, avalanche risk areas are taken into consideration during development review. Substantial potential for avalanche within the Project area does not exist due to the flat and gradually sloping topography. Depending on the characteristics of the preceding water year, shallow or seasonally high groundwater is expected to occur within the Project area, but seepage would not be substantial enough to initiate debris flow mobilization and shallow landslides.

The Project requires some grading for landings but would implement no excavations. Soil units within the Project area are not considered unstable and would not become unstable as a result of Project construction or operations, nor would on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse result. The level of impact from unstable soil conditions would be less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None**.

CEQA VId. Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Standard of Significance. Significant impacts result if the Project locates facilities within areas of moderate to high soil risk, of unstable soils, or of expansive or corrosive soils without appropriate geotechnical and engineering measures.

Soil map units within the Project area are not considered expansive soils, as defined in the Uniform Building Code of 1994. Additionally, according to the Swelling Clays Map (U.S. Geological Survey 1989), the Lake Tahoe Basin is in an area with little to no clays with swelling potential. The level of impact from expansive soils would be less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None**.

CEQA VIe. Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Standard of Significance. The development of septic systems or alternative wastewater disposal systems in areas of soils that are inadequate to support such a use results in a significant impact.

The Project proposes no septic tanks or alternative wastewater disposal systems, and therefore, would create no impact to this resource.

Environmental Analysis: **No Impact.**

Required Mitigation: **None**.

11.0 GREENHOUSE GAS EMISSIONS

The Project has been analyzed for impacts associated with GHG emissions. GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (California Health and Safety Code, Section 38505[g]). The most common GHGs that result from human activity are CO_2, followed by CH_4 and N_2O (EPA 2018). **Table 12** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 12. Greenhouse Gas Emissions Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? (CEQA VIIa)	☐	☐	☒	☐
Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs? (CEQA VIIb)	☐	☐	☒	☐

11.1 CEQA Checklist Analysis

CEQA VIIa. Would the Project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Standard of Significance. El Dorado County AQMD participated in the development of GHG thresholds for air districts in the Sacramento region. The Sacramento Metropolitan AQMD (SMAQMD) recommends a threshold of significance of 1,100 metric tons of carbon dioxide equivalent (CO_2e) per year for the construction phase of projects (2016). This analysis assesses construction and long-term operational emissions as a percent of existing emissions.

Construction Emissions. The Project would temporarily generate GHG emissions from combustion of fossil fuels (i.e., diesel, gasoline) used to run construction equipment and vehicles, both on-site and off-site during construction over four summer seasons (24 months of construction total). The GHG emissions would predominantly occur as CO_2 from diesel engine exhaust. Currently, no federal or state GHG emission thresholds have been adopted. However, the SMAQMD threshold is intended to evaluate a project for consistency with GHG targets established by the California Global Warming Solutions Act of 2006 (AB 32), particularly for emissions occurring by 2020. Project construction and operational emissions were calculated using CalEEMod, Version 2016.3.2. Although CalEEMod calculates operational emissions, the Project will not generate emissions following construction, with the exception of prescribed fire applications, the frequency and intensity of which are unknown at this time. Therefore, operation emissions were not estimated through CalEEMod, but are discussed qualitatively below.

GHGs would result from engine exhaust emissions caused by operation of off-road construction equipment and on-road vehicles. Emissions were calculated using CalEEMod, Version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for various user types to quantify potential criteria pollutants and GHG emissions. The model (output contained in **Appendix C**)

is designed to estimate construction emissions for construction projects and post-construction operations and allows for input of project-specific information. Input parameters were based on default model settings and information provided in the Project description (such as specified equipment, duration of equipment use, and construction season) in Section 3. Parameters used in CalEEMod for this Project are discussed in more detail in Section 7, and can also be found in **Appendix C**. CalEEMod also models emissions of sulfur oxides, CH_4, and N_2O, in addition to emissions of CO_2, for determination of CO_2e. The approximate quantity of total GHG emissions generated by construction activities is shown in **Table 13**.

Table 13. Construction-Related Greenhouse Gas Emissions (Metric Tons per Year)

Construction Activities	Maximum Metric Tons of CO_2e per Year
Total Project Emissions	697.76
AQMD Significance Threshold	1,100
Exceed Threshold?	No

As shown in **Table 13**, Project construction would result in maximum yearly CO_2e emissions of approximately 697.76 metric tons; therefore, emissions would not exceed AQMD significance thresholds for construction-related GHG emissions and the level of potential impact would be less than significant.

Although Vegetation Land Change is considered in CalEEMod, it only includes "Tree" landscapes to be sources of carbon sinks, although recent literature suggests that other land types, such as meadows, can also be considered sites for carbon sequestration (Norton et al. 2011; Reed et al. 2016). As such, the conversion of one vegetation land type to another is not appropriately addressed by the CalEEMod system for a project such as this; therefore, it was left blank for this model run.

Operational Emissions. Air quality and GHG emission impacts associated with broadcast burning will be identified, addressed, and minimized through the El Dorado County AQMD Burn Permit process. Refer to Section 3.18.3, which provides details on the Burn Permit process, and Section 7.1, which provides analysis for CEQA IIIa and concludes that the Project would not significantly conflict with or obstruct implementation of applicable air quality plans and that implementation of the AQMD Burn Plan and Smoke Management Plan and compliance with the Burn Permit conditions would reduce potential impacts to air quality to a level of less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None**.

CEQA VIIIb. Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

Standard of Significance. Currently, neither the TRPA, Tahoe Metropolitan Planning Organization, nor the El Dorado AQMD maintains local or regional plans, policies, or regulations for the purpose of reducing the emissions of GHGs. Therefore, evaluation of this effect relies on general compliance with the 2008 CARB Scoping Plan strategies to achieve the GHG emissions reduction goal as directed by AB 32, as amended by the May 22, 2014, 5-year update. CARB is currently moving forward with a second update to reflect the 2030 target set by Executive Order B-30-15 and codified in SB 32 and companion legislation AB 197.

As discussed under CEQA VIIIa, the threshold established by the SMAQMD is intended to evaluate a project for consistency with GHG targets established in AB 32, particularly for emissions occurring by 2020. Project emissions would be below the threshold; therefore, the Project would not conflict with AB

32, which is one of the primary regulations intended to reduce California's GHG emissions. In 2016, the legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels.

Project implementation would help to achieve the AB 32 and SB 32 goals, in part by contributing to carbon sequestration through revegetation of disturbed areas.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None**.

12.0 HAZARDS & HAZARDOUS MATERIALS

This section evaluates the Project's impacts associated with hazards, hazardous materials, and risk of upset during construction and operations. Impacts on public health from air emissions are discussed in Section 7. **Table 14** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 14. Hazards and Hazardous Materials Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (CEQA VIIIa)	☐	☐	☒	☐
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (CEQA VIIIb)	☐	☐	☒	☐
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (CEQA VIIIc)	☐	☐	☐	☒
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? (CEQA VIIId)	☐	☐	☒	☒
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 for people residing or working in the project area? (CEQA VIIIe)	☐	☐	☐	☒
For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (CEQA VIIIf)	☐	☐	☐	☒
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (CEQA VIIIg)	☐	☐	☒	☐
Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (CEQA VIIIh)	☐	☐	☒	☐

12.1 CEQA Checklist Analysis

CEQA VIIIa and CEQA VIIIb. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Standard of Significance. Non-compliance with state and federal standards for transport and use of hazardous materials during construction or operation of the Project constitutes a significant impact. The Federal Hazardous Materials Transportation Act, California Health and Safety Code Division 20, and CCR Titles 8 and 19 determine the regulatory standards.

The El Dorado County General Plan addresses industrial or other land use designations that allow the handling, use, or manufacture of hazardous materials. Timber management activities would involve the transport and use of limited quantities of miscellaneous hazardous substances including gasoline, diesel fuel, hydraulic fluid, solvents, and oils. These chemicals would be brought to the Project area, as well as transported along the roadways and eventually stored on-site during Project implementation. Federal and state laws regulate the handling, storage, and transport of these and other hazardous materials, as well as the mechanisms to respond and clean up any spills along local and regional roadways.

In the event that undocumented hazardous materials are encountered in site soils or water during Project implementation, the Forest Service contractor will comply with Timber Wavier Criteria 7 (refer to Section 3.14) to reduce potential impacts to a level of less than significant. All equipment used must be monitored for leaks, and removed from service if necessary to protect water quality. All spills must be immediately contained and spilled materials and/or contaminated soils must be properly disposed. An emergency spill kit adequate to contain spills that could result from on-site equipment must be at the Project site at all times of equipment use. Project RPMs, detailed in Section 3.17.4, will be implemented:

1. Locate landings outside SEZs. Prohibit fuel storage and refueling in SEZs. Procedures and spill prevention control measures for hazardous materials of any amount are included in Project contract clauses.
2. Hazardous materials, including diesel fuels and gasoline, will be transported, stored and handled outside of SEZs. Spill Prevention, Containment, and Countermeasures Plans will be prepared, if the quantities used require them.

Chemicals present on-site or used for the Project would be staged and stored within landings that are located outside of TRPA SEZ and would be handled in accordance with applicable federal, state, and local regulations for hazardous substances. Therefore, the potential for impacts related to hazardous materials transport, use, or disposal would be considered less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA VIIIc. Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Standard of Significance. The transport or use of hazardous materials within 0.25 mile of a school constitutes a significant impact if the Project includes no measures ensuring public health and safety.

As discussed in the analysis for CEQA VIIIa and b, the Project implementation would require the use of common hazardous materials during implementation and although accidental releases could occur, materials would be handled in accordance with applicable regulations intended to protect public health and safety. Operations would consist of a restored meadow ecosystem with no potential to emit hazardous

materials or emissions. No existing or proposed schools are located within 0.25 mile of the Project area, and as a result, no impacts would occur.

Environmental Analysis: **No Impact**.

Required Mitigation: **None.**

CEQA VIIId. Would the Project 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?

Standard of Significance. A project location on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 creates a significant hazard to the public or the environment.

Data have been obtained and analyzed from the following sources:

1. GeoTracker for Hazardous Materials (http://geotracker.waterboards.ca.gov/; accessed November 6, 2018): The GeoTracker database was accessed, which displays locations of leaking underground fuel tanks sites regulated by the State Water Board. There are no leaking underground fuel tanks sites within the Project area. There is no mapped Spills, Leaks, Investigation, and Cleanup site in the vicinity of the Project area. The closest sites are located in Tahoma and all are closed.
2. California Department of Toxic Substances Control, EnviroStor: The EnviroStor database (recently replacing the CalSites database for hazardous substance release sites) lists no sites in the vicinity of the Project area (https://www.envirostor.dtsc.ca.gov/public/; accessed November 6, 2018).
3. CORTESE List: No sites were identified with waste constituents above hazardous waste levels within, or directly adjacent to, the Project area (California Environmental Protection Agency 2018). Additionally, there are no Cease and Desist Orders and Cleanup and Abatement Orders within, or directly adjacent to, the Project area (https://calepa.ca.gov/sitecleanup/corteselist/; accessed November 6, 2018).
4. A review of the EPA hazardous materials sites database did not identify the Project area as a known hazardous materials site (USEPA 2017).

Given that no hazardous sites are identified within or in the vicinity of the Project area, and Project implementation will require little ground disturbance and no excavations, the Project would create no significant hazard to the public or environment.

Environmental Analysis: **No Impact**.

Required Mitigation: **None.**

CEQA VIIIe. 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 for people residing or working in the project area?

Standard of Significance. A significant impact results from non-compliance with an airport comprehensive land use plan or Federal Aviation Administration safety regulations.

The Project is not located within an airport land use plan, or within 2 miles of a public or private airport. Therefore, there is no potential for the Project to result in a safety hazard for people residing or working in the Project area, and no impact would occur.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA VIIIf. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Standard of Significance. Creation of a safety hazard to people residing or working in the vicinity of a private airstrip results in a significant impact.

The Project would not be located within the vicinity of a private airstrip and would not result in a safety hazard for people residing or working in the Project area. Therefore, no impact would occur.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA VIIIg. Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Standard of Significance. If impediments to emergency response or evacuation routes occur or response times fall below emergency response plan standards because of Project construction or operations, a significant impact occurs.

The Project would not result in any physical features that would impair implementation of, or physically interfere with, emergency evacuations. Access for fire and police emergency response vehicles would be maintained on SR 89 and any of the smaller county roads throughout the implementation period. Wildland-urban interface areas are locations in which developed areas are adjacent to areas of natural vegetation capable of carrying a wildfire. In the event of wildfire or other significant community threat, emergency access for evacuation or fire-fighting equipment can occur along the existing Forest Service roads. Therefore, potential impacts to emergency, fire, and police response would be less than significant.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None.**

CEQA VIIIh. Would the Project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Standard of Significance. Project exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands creates a significant impact.

The Project area is a meadow setting that has been encroached upon by conifers and is surrounded by vegetation, trees, and shrubs. Although Project goals are to restore the natural fire regime in Meeks Meadow and to reduce the potential for catastrophic wildland fire and provide for defensible space adjacent to communities, the risk of fire is still a possibility during implementation. Equipment used during timber management activities may generate sparks that could ignite dry vegetation on or adjacent to the Project area and ignite a wildland fire. The nearest fire station is the Meeks Bay Fire Station that is located at the southern entrance to the Project area and operated by the Forest Service. Engine response time would be minimized by this proximity to the Project area.

The Project would not result in additional structures, dwellings, or other constructed features susceptible to wildland fires, nor would the Project cause additional susceptibility to wildland fire. As a result, potential impacts would be less than significant.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None.**

13.0 HYDROLOGY & WATER QUALITY

This section evaluates the Project's impacts on surface and groundwater hydrology and water quality during construction and operations. **Table 15** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 15. Hydrology and Water Quality Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Violate any water quality standards or waste discharge requirements? (CEQA IXa)	☐	☐	☒	☐
Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? (CEQA IXb)	☐	☐	☒	☐
Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? (CEQA IXc)	☐	☐	☒	☐
Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (CEQA IXd)	☐	☐	☒	☐
Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? (CEQA IXe)	☐	☐	☒	☐
Otherwise substantially degrade water quality? (CEQA IXf)	☐	☐	☒	☐
Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (CEQA IXg)	☐	☐	☐	☒
Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (CEQA IXh)	☐	☐	☐	☒

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? (CEQA IXi)	☐	☐	☐	☒
Inundation by seiche, tsunami, or mudflow? (CEQA IXj)	☐	☐	☐	☒

13.1 CEQA Checklist Analysis

CEQA IXa. Would the Project violate any water quality standards or waste discharge requirements?

Standard of Significance. Failure to implement effective, reasonable and appropriate measures to protect water quality and/or non-compliance with WQOs and 2014 Timber Waiver conditions results in a significant impact to surface water quality and beneficial uses. TRPA Code Chapters 33 and 60 and the Lahontan Basin Plan Chapter 5 disclose the applicable codified regulations and narrative and quantitative WQOs.

The discharge of surface flows generated within the Project area to surface waters during construction or operations cannot cause the concentrations in Lake Tahoe, Upper Truckee River, minor surface waters, or minor wetlands to exceed the WQO limits stated in the Lahontan Basin Plan, TRPA RPU Chapter 60, and applicable Board Orders.

Site disturbance, surface runoff, erosion, and sedimentation during Project implementation can pose direct and indirect short-term impacts to surface water quality and beneficial uses within and downstream of the Project area. During timber management activities, ground-disturbing activities could expose soils to potential mobilization by rainfall/runoff and wind during construction of temporary landing and temporary road and conifer thinning and removal. Non-sediment-related pollutants that are also of concern are fuels used in equipment. Indirect impacts of atmospheric deposition of particulates could occur if disturbed areas are not revegetated or significant increased vehicle miles of travel occur.

This analysis evaluates potential impacts to water quality in the context of the Project actions and the BMPs and RPMs that have been built into the Project proposal. These measures, incorporated into the Project proposal during planning and design, along with TRPA Project conditions and the Timber Waiver criteria and conditions incorporated into the Project proposal during permitting, will be implemented to avoid, reduce, minimize, or otherwise mitigate potential effects to surface water quality and beneficial uses. These Project components address direct and indirect, short-term, and long-term effects to surface water quality and beneficial uses associated with surface runoff, potential discharge to land, and atmospheric deposition within the Project area.

Short-term Construction Impacts. Project implementation would involve land disturbance activities, such as vegetation removal, soil disturbance, and soil compaction. Short-term impacts to surface water quality and beneficial uses could result if precipitation events occur simultaneously with timber management activities. Disturbed and compacted soils could alter contributing runoff rates and subsequently increase peak and total runoff volumes from the Project area. A small potential for accidental petroleum releases from motorized equipment exists during implementation, which could result in temporary effects to water quality.

To avoid and minimize potential temporary effects to surface water quality in Meeks Creek, the Project locates landings and temporary roads outside of WBBZs and outside of TRPA SEZ. Project area

topography, which is relatively flat, presents low risk for erosion and sedimentation. Implementation of the RPMs, as detailed in Section 3.17 of the Project description, and compliance with Timber Waiver Conditions 8 through 13, 15, 16, and 20 through 23 (refer to Section 3.15) would further reduce the potential to impact surface water during implementation by avoiding direct impacts to waterbodies and minimizing ground cover, soil disturbance, and the potential for sediment delivery during timber management activities. The Project does not propose any instream activities or channel modifications.

This analysis concludes that through implementation of the Project-specific RPMs, the Project would adequately avoid and minimize the potential for direct and indirect water quality degradation during implementation. Following implementation, the long-term cultural management by the Washoe Tribe would ensure restored meadow functions persist. Additionally, conformance with Timber Waiver conditions and TRPA Project permitting conditions would reduce direct and indirect short-term potential impacts to surface water quality and beneficial uses during and following Project implementation to a level of less than significant.

Long-term Operation Impacts. The Project thins and removes encroaching conifers and introduces periodic broadcast burning, a type of prescribed fire. Site stabilization, revegetation, and long-term cultural management would minimize potential adverse impacts to the Meeks Creek channel system following Project implementation. The Project would introduce little long-term potential for runoff containing hydrocarbons, heavy metals, and other chemicals or toxins associated with motorized vehicles and exhaust. The Project includes no snow removal or use of deicing chemicals or sand. The Project includes strategies for revegetation and restoration based on the type and location of disturbance with goals of re-establishment of meadow hydrology and vegetation communities. The Project does not include ornamental landscaping or use of fertilizer.

The direct and indirect long-term impacts to surface water quality and beneficial uses from cultural management of the Project area would be less than significant based on the potential benefits to the Meeks Meadow complex and the Project's contributions toward attainment of TRPA environmental thresholds and Forest Service fuel reduction goals.

Atmospheric Deposition. Atmospheric sources can contribute to surface water quality degradation, as more than half of the nitrogen loading in Lake Tahoe is delivered by air (TRPA and Nevada Department of Environmental Protection 2008). Sources of airborne pollutants include motorized vehicles, dust and particulates from unvegetated slopes, and pulverized native road surfaces. Fugitive dust generated during Project implementation could increase ambient fine particulate concentrations. Fine particulate emissions can be deposited directly in surface waters or can be transported by runoff to surface waters.

The Project includes RPMs, as detailed in Sections 3.17.5, 3.17.7, and 3.17.11, to avoid and minimize the creation of fugitive dust. The Project minimizes long-term, potential impacts to surface water quality and atmospheric deposition through site stabilization, revegetation, resource monitoring, and long-term cultural management of Project area by the Washoe Tribe.

Anti-Degradation Policy. The State Anti-degradation Policy (Resolution No. 68-16) is incorporated into regional water quality control plans, including the Lahontan Basin Plan. The policy applies to high-quality waters only (i.e., Lake Tahoe and tributaries) and requires that existing high quality be maintained to the maximum extent possible. The Project implements reasonable and appropriate measures for the protection of surface water quality and beneficial uses and complies with the criteria and conditions set forth in Board Order No. RT6-2014-0030. Based on the stated evaluation criteria for determination of significant impacts to surface water quality and beneficial uses, the Project maintains beneficial uses and protects surface water quality through the Project proposal and implementation of the Project-specific RPMs in conformance with federal, regional, state, and county codified regulations for protection of beneficial uses and surface water quality.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None.**

CEQA IXb. Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Standard of Significance. A significant impact results if the Project installs improvements that intercept groundwater or otherwise cause substantial changes in existing groundwater quality, quantity, elevations, or movement; requires excavations greater than 5 feet that will intercept groundwater; or fails to comply with Lahontan Water Board requirements for disposal of groundwater during construction, as outlined in TRPA Code Chapters 33 and 60, Lahontan Basin Plan Chapter 5.7, and Lahontan Board Order No R6T-2017-0010 (Tahoe General Construction Permit, when applicable).

Groundwater Quantity and Movement. No Project actions would adversely affect groundwater quantity or movement. An expected result of conifer thinning and removal would be increased water table elevations. The Project would, however, result in no change to the quantity of groundwater, either through direct addition or withdrawal, and thus poses no significantly adverse impacts to local groundwater table levels or to the existing available public water supply. The Project accommodates groundwater infiltration of surface runoff, and the infiltration of surface water to groundwater would occur in close proximity to its origin. The Project includes some earthwork but proposes no excavation and maintains the existing direction and rate of groundwater flows. The level of impact to groundwater quantity and movement would be less than significant.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None.**

CEQA IXc. Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Standard of Significance. A significant impact occurs if Project construction or operations substantially alter an existing watercourse alignment or capacities or increases in runoff occur such that flooding occurs because the 20-year, 1-hour storm volume cannot be captured by existing or proposed stormwater drainage facilities.

Alterations to drainage patterns capable of creating on-site or off-site erosion produce a significant impact. To conform to TRPA codified regulations set forth in TRPA Code Chapter 60, the 20-year, 1-hour storm runoff volume must be contained and infiltrated within the Project area so that existing drainage patterns do not substantially change and result in erosion or siltation on- or off-site. The Project will implement source controls so that existing drainage patterns would not substantially change and result in erosion or siltation on- or off-site.

The Project proposes no temporary crossings or instream construction along the Meeks Creek main channel, a Class I waterbody. Properly installed temporary Class III waterbody crossings would not contribute to substantial erosion or siltation on- or off-site. Temporary roads will be obliterated and landings will be rehabilitated post-implementation. Revegetation and rehabilitation will include spreading chip, subsoiling to a minimum depth of 12 inches, reseeding with culturally significant, native species, and spreading meadow mowing clippings as ground cover.

The Project is designed to avoid and minimize potential hydrologic connections to the Meeks Creek main channel and Class III drainages and includes RPMs (Section 3.17) that are adequate to avoid substantially altering the existing drainage pattern of the Project area, including through the alteration of the course of a stream or river. The Project reduces the potential to create erosion or siltation on- or off-site to a level of less than significant by appropriately avoiding areas in and adjacent to special aquatic sites; minimizing soil disturbance in WBBZs; mechanically harvesting only during periods of operable soil conditions; establishing temporary Class III crossings per Timber Waiver Category 6 conditions 8 and 18 (refer to Section 3.15) and RPM 6 (refer to Section 3.17.2); and providing for adequate drainage and ground cover protection during and following Project implementation.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None.**

CEQA IXd. Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Standard of Significance. Refer to the analysis for CEQA IXc, which concludes the level of impact to existing drainage patterns would be reduced to a level of less than significant by the Project.

The Project will maintain existing surface water drainage patterns during implementation and would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. The Project does not propose the creation of any impervious surfaces in the Project area. The long-term management of the Meeks Meadow complex would not adversely alter drainage patterns or increase runoff rates or volumes that would result in flooding off-site. The Project would allow for capture, retention, and infiltration of surface runoff, which reduces flooding potential, and as a result, potential impacts to existing drainage patterns and flooding would be less than significant.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None.**

CEQA IXe. Would the Project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Standard of Significance. Refer to the analyses for CEQA IXa through CEQA IXd for potential impacts to existing drainage patterns. Analyses conclude the level of impact to drainage patterns is reduced to a level of less than significant by the Project proposal. The Project area contains no existing, managed stormwater drainage systems and no such systems are planned for the site. As a result, the potential to provide substantial sources of polluted runoff is less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA IXf. Would the Project otherwise substantially degrade water quality?

Standard of Significance. Failure to implement effective, reasonable, and appropriate measures to protect water quality and non-compliance with WQOs and 2014 Timber Waiver conditions results in a significant impact to surface water quality and beneficial use.

Refer to the analysis for CEQA IXa, which concludes the level of impact to surface water quality and beneficial uses would be less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA IXg. Would the Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Standard of Significance. Placement of habitable structures within mapped 100-year flood hazard area creates a significant impact.

The Project does not construct housing or habitable structures and thus places no housing within a mapped 100-year flood hazard area. No impact would occur.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA IXh. Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Standard of Significance. If the Project places structures that impede or redirect 100-year flood flows, a significant impact results.

FEMA Flood Insurance Rate Maps consulted indicate the Project area is mapped as Zone D, unclassified (**Figure 6**). The Project would place no structures within a 100-year flood hazard area and would result in no impact to 100-year floodplain storage capacity, flow routes, or boundaries and no impacts to neighboring properties or structures.

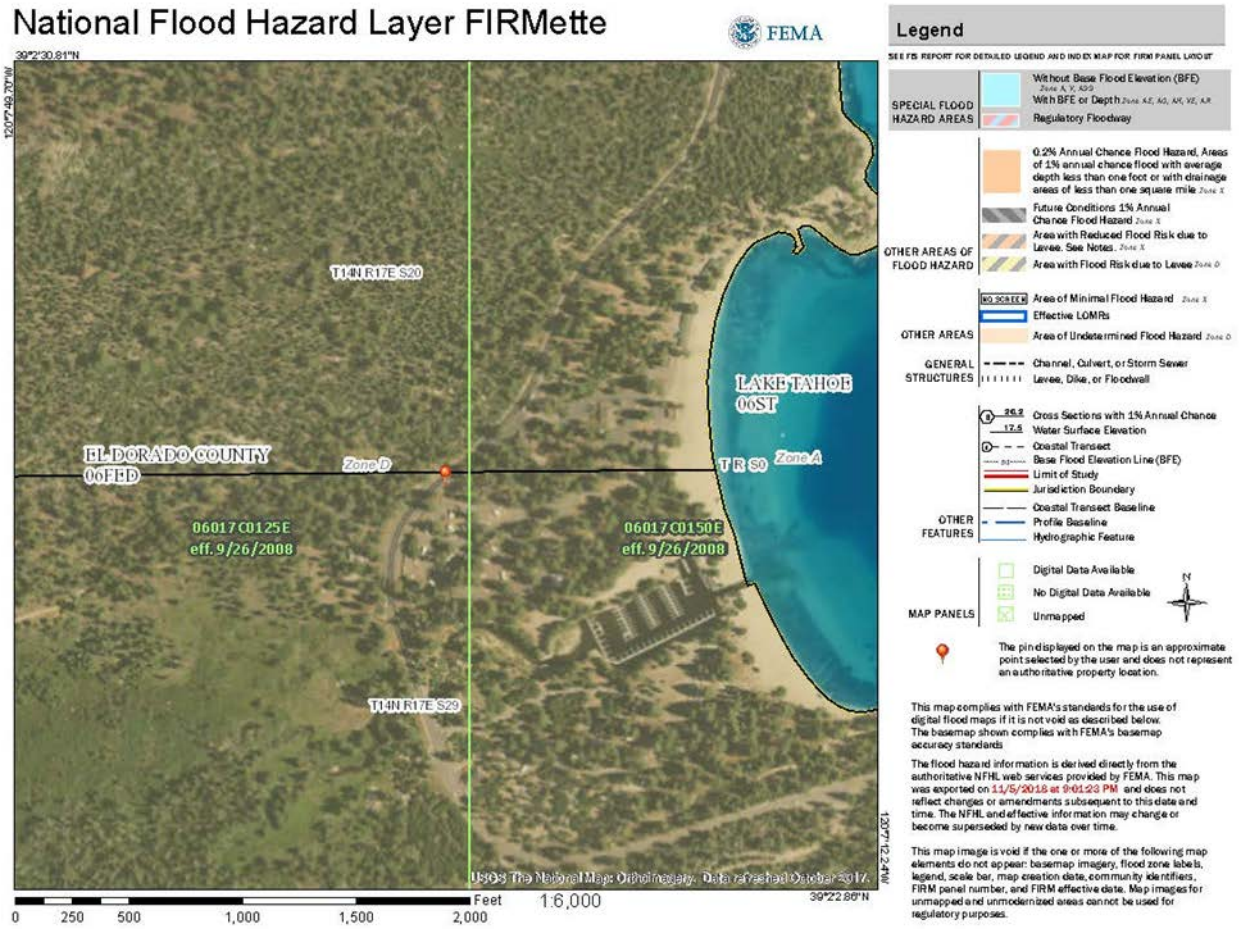

Figure 6 FEMA Flood Hazard Zones.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA IXi. Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Standard of Significance. Exposure of people or structures to a significant risk of loss, injury, or death involving flooding constitutes a significant impact.

The Project would not alter any hydrological conditions that would increase site inundation or debris flow risk over that which currently exists within the Project area. Risk of dam failure would not be applicable to the Project area because no dams or levees are present or proposed.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA IXj. Would the Project expose people or structures to inundation by seiche, tsunami, or mudflow?

Standard of Significance. An increase in risk of inundation by seiche, tsunami, or mudflow as a result of Project installation constitutes a significant impact.

The Project would not create any housing or other structures and would not expose people or structures to impacts from inundation by seiche, tsunami, or mudflow. Therefore, no impact would result.

Environmental Analysis: **No Impact**.

Required Mitigation: **None.**

14.0 LAND USE & PLANNING

This section evaluates the Project's impacts on land use and planning during construction and operations. **Table 16** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 16. Land Use and Planning Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Physically divide an established community? (CEQA Xa)	☐	☐	☐	☒
Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? (CEQA Xb)	☐	☐	☐	☒
Conflict with any applicable habitat conservation plan or natural community conservation plan? (CEQA Xc)	☐	☐	☐	☒

14.1 CEQA Checklist Analysis

CEQA Xa. Would the Project physically divide an established community?

Standard of Significance. A significant impact results if the Project installs a structural impediment to vehicle or pedestrian movement in the community. The TRPA RPU, PASs and Code, and County General Plan determine this level of impact significance.

The Project restores the Meeks Meadow complex, which would not physically divide an established community. There are several seasonal residences located in the vicinity of the Project area, but the Project is not of a size or use that physically divides the community or redirects existing traffic to change circulation patterns.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA Xb. Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Standard of Significance. A significant impact results from non-compliance of the Project with land use plans, goals, policies, regulations, or provisions as established by the TRPA RPU, TRPA Code Chapters 21 and 20, and the County General Plan.

No change in land use is proposed or required and none would result from the implementation of the Project. The Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project. Therefore, no impact would result.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA Xc. Would the Project conflict with any applicable habitat conservation plan or natural community conservation plan?

Standard of Significance. A significant impact results from non-compliance with an adopted Habitat Conservation Plan or Natural Community Conservation Plan.

The Project does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan because no such plans exist for the Project area. No impact would result.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

15.0 MINERAL RESOURCES

This section evaluates the Project's impacts on mineral resources during construction and operations. **Table 17** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 17. Mineral Resources Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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? (CEQA XIa)	☐	☐	☐	☒
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? (CEQA XIb)	☐	☐	☐	☒

15.1 CEQA Checklist Analysis

CEQA XIa. Would the Project 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?

Standard of Significance. A significant impact occurs if the Project creates a loss of availability of mineral resources that are valuable to the region.

The Forest Plan, County General Plan, and TRPA RPU do not identify any sites within the Project area as containing an important mineral resource. Because such resources do not occur in the Project area, the Project would create no impact to such resources.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA XIb. Would the Project 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?

Standard of Significance. A significant impact occurs if the Project creates a loss of availability of locally important mineral resource recovery sites.

The Project area contains no mineral resource recovery sites, and therefore, the Project would not 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.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

16.0 NOISE

This section evaluates the Project's noise impacts during construction and operations. **Table 18** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 18. Noise Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (CEQA XIIa)	☐	☐	☒	☐
Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (CEQA XIIb)	☐	☐	☒	☐
A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (CEQA XIIc)	☐	☐	☐	☒
A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (CEQA XIId)	☐	☐	☒	☐
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 expose people residing or working in the project area to excessive noise levels? (CEQA XIIe)	☐	☐	☐	☒
For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (CEQA XIIf)	☐	☐	☐	☒

16.1 CEQA Checklist Analysis

CEQA XIIa. Would the Project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Standard of Significance. Exceedance of Community Noise Equivalent Level (CNEL) limits stated in project-area PASs and regional and county noise ordinances constitutes a significant noise impact.

Timber management equipment would produce periodic localized ambient noise during standard working hours during the implementation periods. TRPA has established noise thresholds for CNELs for various land use categories and single-event standards for specific noise sources. CNELs are developed for permanent uses and activities, not construction projects.

Table 19. Maximum Cumulative Noise Equivalent Levels

Land Use District	CNEL (dBA)
Meeks Bay (PAS 050)	50/55*
Neighborhood Professional	55
Healthcare Campus	55

* The maximum community noise equivalent level for this Plan Area is 50 CNEL. The maximum community noise equivalent level for the Highway 89 corridor is 55 CNEL.

TRPA Code Chapter 68, Noise Limitations, establishes noise limitations for areas within TRPA's jurisdiction. TRPA Code Section 68.3 establishes noise level standards (expressed in CNEL) that shall not be exceeded. In addition, Section 68.3 stipulates that community noise levels shall not exceed levels existing on August 26, 1982, where such levels are known. Section 68.9 stipulates that TRPA-approved construction or maintenance projects, or the demolition of structures, are exempt from TRPA Code Noise Limitations (TRPA Code Chapter 68) if the activities occur between the hours 8:00 a.m. and 6:30 p.m.

The operation of the Project would result in no new, long-term sources of operational noise. Noise from recreation activities (e.g., bicycling, walking, and running) is not considered nuisance noise.

The Project would create less-than-significant noise levels during construction and operations.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None.**

CEQA XIIb. Would the Project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Standard of Significance. 30 CFR Part 816 defines a significant impact as a vibrational increase greater than 1 inch/second peak particle velocity, as based on typical characteristics of project equipment and materials.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Timber management equipment may produce localized vibration, but vibrations would be temporary in nature and would not occur in close proximity to residential structures in the vicinity of the Project area. As a result of the type of project and the extent of the Project area, the potential for the Project to result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels would be less than significant.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None.**

CEQA XIIc. Would the Project result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Standard of Significance. Substantial permanent increase in ambient noise levels in the Project vicinity created by the Project constitutes a significant impact, as defined by permissible CNELs for PASs and noise ordinances.

As discussed in CEQA XIIa, the Project will result in a temporary, localized increase in ambient noise levels during implementation, but the Project would not result in a permanent increase in the permissible levels of ambient noise above established CNELs for the PAS or local noise ordinances. No impact would result.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA XIId Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Standard of Significance. TRPA Code Section 68.9 stipulates that TRPA-approved construction or maintenance projects are exempt from TRPA's noise limitations during the hours of 8:00 a.m. and 6:30 p.m. Construction activities occurring outside of these exempt hours, or if noise levels exceed CNEL levels set for the land use categories and PAS corresponding to the Project area (see **Table 19**), will result in a significant impact.

As discussed in CEQA XIIa, construction activities would result in a temporary and intermittent increases in ambient noise levels. Noise impacts from construction would depend upon the noise generated by the various pieces of construction equipment, the timing and duration of noise-generating activities, the distance between the noise-generating activities and nearby sensitive receptors, and the time of day or night that the construction activities occur. Construction is typically carried out in stages. During each stage of construction, a different mix of construction equipment would operate. The EPA estimates that construction of public works projects, which include features similar to those of the Project, typically generates an average of between 78 and 88 dBA depending on the construction phase and the amount of equipment being used (EPA 1971). Noise generated by a point source, such as equipment at a construction site, drops off at a rate of 6 dBA per doubling of distance. Assuming construction noise of 78 to 88 dBA, noise attenuation from construction activities is anticipated to occur as shown in **Table 20**.

Table 20. Attenuation of a Noise Source of 78 to 88 dBA

Distance (feet)	Noise Level (dBA)
50	78 – 88
100	72 – 82
200	66 – 76
400	60 – 70
800	54 – 64
1,600	48 – 58
3,200	42 – 52
6,400	36 – 46
12,800	30 – 40

Note: this attenuation is applicable to point sources, such as construction equipment, not mobile sources, such as truck traffic.

Potential receptors would be seasonal residences sited along the entrances to Forest Service Roads 14N42 and 14N44. Construction noise would not be expected to travel the distance to the Meeks Bay Resort and

Campground and such noise would not be discernable above the existing vehicular noise passing along SR 89. The Project will be conducted during typical business hours and RPM 24 (Section 3.17.6) will be implemented, which prohibits tree cutting activities within 300 feet of residences. Given the short-term, seasonal, and intermittent nature of the timber management phase of Project implementation, the Project would not create substantial temporary or periodic increase in ambient noise levels in the Project vicinity above those levels existing without the Project.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA XIIe. 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 expose people residing or working in the project area to excessive noise levels?

Standard of Significance. Exposure of people residing or working in the Project area to excessive noise levels from aircraft results in a significant impact.

The Project area is not located within an airport land use plan, or within 2 miles of a public airport, and the Project would not expose sensitive receptors to excessive noise levels from airport/aircraft operations. No impact would result.

Environmental Analysis: **No Impact**.

Required Mitigation: **None.**

CEQA XIIf. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Standard of Significance. Exposure of people residing or working in the Project area to excessive noise levels from aircraft results in a significant impact.

The Project is not located in the vicinity of a private airstrip and would not expose people in the Project area to excessive noise levels from aircraft. The Project would not establish permanent, non-transitory populations or expose people to excessive noise levels.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

17.0 POPULATION & HOUSING

This section evaluates the Project's population and housing impacts during construction and operations. **Table 21** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and the TRPA Initial Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 21. Population and Housing Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Induce substantial 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)? (CEQA XIIIa)	☐	☐	☐	☒
Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (CEQA XIIIb)	☐	☐	☐	☒
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (CEQA XIIIc)	☐	☐	☐	☒

17.1 CEQA Checklist Analysis

CEQA XIIIa. Would the Project induce substantial 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)?

Standard of Significance. A significant impact results from direct and indirect population growth in excess of the growth anticipated in the TRPA RPU as disclosed in the Land Use Element and PASs and Area Plans.

The Project proposal provides for no long-term employment, educational opportunities, or other population-generating features known to increase local populations. The Project would not directly or indirectly induce substantial population growth because no new homes or business would be constructed, and the small labor force needed to implement the Project would be drawn from the local and regional population. No impacts associated with population growth would occur.

Environmental Analysis: **No Impact**.

Required Mitigation: **None.**

CEQA XIIIb. Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Standard of Significance. Displacement of substantial numbers of existing housing that necessitates construction of replacement housing elsewhere creates a significant impact.

The Project would not displace housing or necessitate the construction of replacement housing elsewhere because no people currently live within the Project area. No impacts to housing would result.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA XIIIc. Would the Project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Standard of Significance. Displacement of substantial numbers of people that necessitates construction of replacement housing elsewhere creates a significant impact.

The Project would not displace people or necessitate the construction of replacement housing elsewhere, because no people currently live within the Project area. No impact to housing would result.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

18.0 PUBLIC SERVICES

This section evaluates the Project's impacts on public services during construction and operations. **Table 22** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 22. Public Service Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services (CEQA XIVa):				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

18.1 CEQA Checklist Analysis

CEQA XIVa. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, and other public facilities?

Standard of Significance. A significant impact results to governmental and public services if the Project causes an increase demand for personnel, equipment, or infrastructure beyond that planned by public service entities, the TRPA RPU, or the County General Plan.

Fire Protection. The Project would not require new construction or expansion of existing fire protection facilities, because the Project is located in an area that is currently served by the Meeks Bay Fire Protection District. The Project would require fire protection during timber management activities. Broadcast burning would be conducted by the Forest Service and Washoe Tribe burn crews. Because any impact would be temporary and there would be no need for additional services, potential impacts on fire protection services would be less than significant.

Law Enforcement. Typically, increases in the need for police services are linked to an increase in population. As discussed under CEQA XIILa, the Project would not result in a substantial increase in population in the area. Potential impacts on law enforcement would be less than significant.

Schools. Impacts to school facilities are typically linked to an increase or decrease in population. As discussed in CEQA XIIIa, the Project would not impact population; therefore, the potential to impact school services would be less than significant.

Parks. Impacts to parks are typically linked to an increase or decrease in population. As discussed in CEQA XIIIa, the Project would not impact population, and therefore, the potential to impact services associated with the parks would be less than significant.

Other Public Facilities. The Project area is served by the existing facilities and would not result in the need for additional services. Therefore, the potential to impact public services would be less than significant.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None.**

19.0 RECREATION

This section evaluates the Project's impacts on recreation during construction and operations. **Table 23** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 23. Recreation Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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? (CEQA XVa)	☐	☐	☒	☐
Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (CEQA XVb)	☐	☐	☒	☐

19.1 CEQA Checklist Analysis

CEQA XVa. Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Standard of Significance. If the Project improves access to recreation facilities or public lands used for recreation by numbers sufficient to create new disturbance, this constitutes a significant impact.

Demands for recreational facilities are driven by the ratio of parkland to population. There are no neighborhood or regional parks in the vicinity of the Project area. There are recreational facilities at Meeks Bay Resort and a Desolation Wilderness trailhead is accessed via Forest Service Road 14N42.

The Project would not result in increased population, and therefore, the potential to contribute to substantial physical deterioration of recreational facilities would be less than significant.

Environmental Analysis: **Less Than Significant Impact**.

Required Mitigation: **None.**

CEQA XVb. Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Standard of Significance. A significant impact results if the Project requires the construction or expansion of recreational facilities that cause an adverse physical effect on the environment. The TRPA RPU Recreation Element, PASs, and thresholds, along with the County Recreation Element, determine this level of impact significance. LTBMU Forest Plan recreation standard and guideline SG 105 specifies that during implementation of projects with the potential to affect recreation activities, measures to minimize impacts

to recreation opportunities, facilities, and visitor safety should be implemented. Such measures could include limited use or temporary closures.

The Project would not require the construction or expansion of other recreational facilities because it would not result in increased population. The Project may require temporary closure or rerouting of the trailhead to Desolation Wilderness. However, implementation of recreation RPMs, as detailed in Section 3.17.13 of the Project description, would reduce temporary impacts on pedestrian and trail users during timber management activities. Following conifer removal and outside of times of prescribed burning, access to recreational amenities would not be impacted.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

20.0 TRANSPORTATION & TRAFFIC

This section evaluates the Project's impacts on transportation and traffic during construction and operations **Table 24** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 24. Transportation and Traffic Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? (CEQA XVIa)	☐	☐	☒	☐
Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? (CEQA XVIb)	☐	☐	☒	☐
Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (CEQA XVIc)	☐	☐	☐	☒
Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (CEQA XVId)	☐	☐	☐	☒
Result in inadequate emergency access? (CEQA XVIe)	☐	☐	☒	☐
Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? (CEQA XVIf)	☐	☐	☐	☒

20.1 CEQA Checklist Analysis

CEQA XVIa. Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Standard of Significance. Project conflicts with applicable plans, ordinances, or policies establishing measures of effectiveness for circulation system performance result in a significant impact.

The Project would not result in a substantial increase in traffic relative to the capacity of the road system and is not expected to conflict with any plan, ordinance, or policy related to effective circulation. Project implementation would result in temporary increase of worker trips for crews accessing the Project area and haul trips associated with removal of biomass from the Project area. Through installation of the required signage indicating intermittent entry of haul trucks onto SR 89 and traffic controls conducted by the timber contractor, the temporary and intermittent potential to impact the circulation system at this intersection would be reduced to a level of less than significant.

After the Project is completed, the operation of the meadow system would not create an increase in traffic or conflict with established plans, policies, or standards related to motorized or non-motorized travel.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA XVIb. Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways?

Standard of Significance. Conflict with applicable congestion management programs, specifically level of service standards, creates a significant impact to traffic and circulation from the Project.

Construction Impacts. The Project would have a temporary and intermittent impact on traffic circulation during implementation as a result of haul trucks turning left or right out of the Project area via Forest Service Roads 14N42 and 14N44 and on to SR 89. Safe egress/ingress will be maintained during implementation, using standard signage, delineators, barricades, and flagger personnel as necessary. The minimal temporary increase in Project-related traffic, including worker trips and haul trips, would not be expected to decrease the level of service, change travel demands, or create any congestion. Project activities would be temporary and would not be expected to result in a substantial increase in traffic relative to the capacity of the street system. Therefore, the impact would be less than significant.

Operational Impacts. No impacts to traffic operations would result from Project operations.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None.**

CEQA XVIc. Would the Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Standard of Significance. If the Project causes a change in air traffic patterns that results in substantial safety risks, a significant impact occurs.

The Federal Aviation Administration has specific rules and regulations that govern airports and require an air space permit for equipment over a certain height within a certain distance of an airport. Project implementation would not require a Federal Aviation Administration permit and would not be in violations of rules governing the airspace. The Project implements a meadow restoration project on federally managed, public land and would create no impact to air traffic patterns, levels, or locations.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA XVId. Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Standard of Significance. Substantial increases in hazards resulting from the Project proposal or incompatible use of the Forest Service access roads constitute a significant impact.

The Project would not change the geometry of the existing Forest Service roads. The Project does not include new design features on these roadways, and therefore, would not impact the safety of users or change the compatibility of use.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA XVIe. Would the Project result in inadequate emergency access?

Standard of Significance. Inadequate access for emergency responders during Project construction and operations constitutes a significant impact.

As discussed in the analysis for CEQA VIIIg, the Project would remain open to emergency vehicles during construction activities and provide for adequate emergency access.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA XVIf. Would the Project conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Standard of Significance. Inconsistency with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities constitutes a significant impact.

The Project would not involve a change in land use or affect transportation policies, including any policies, plans, or programs supporting alternative transportation. The Project would not add residences or other land uses that would generate a need for alternative transportation and would not impact existing alternative transportation plans or programs. The Project would create no impact to existing or planned bus routes and does not contain any bicycle or pedestrian facilities. No impact to performance or safety of such facilities would occur.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

21.0 TRIBAL CULTURAL RESOURCES

This section evaluates the Project's impacts on tribal cultural resources. **Table 25** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant

Table 25. Tribal Resources Impacts

Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource 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:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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)? (CEQA XVIIa) or	☐	☐	☒	☐
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 Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? (CEQA XVIIb)	☐	☐	☒	☐

21.1 CEQA Checklist Analysis

CEQA XVIIa and CEQA XVIIb. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource 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?

Standard of Significance. A substantial adverse change in the significance of a tribal cultural resource, as defined in PRC Section 21074, constitutes a significant impact.

Pursuant to the California Public Resources Code Section 5097.9, State and local agencies cooperate with and assist the NAHC in its efforts to preserve and protect locations of sacred or special cultural and spiritual significance to Native Americans. The Project area is National Forest Land, owned by the U.S. federal government and managed by the LTBMU. The Washoe Tribe does not own the Project area; however, the tribe has adequate site control and legal management authority to support the Project through a series of memoranda of understanding (MOUs) and Cooperative Agreements, as described in Section 2.3, Project Background.

Per the Forest Service cultural report contained in **Appendix E**, the project area has been previously surveyed for cultural resources and fall under stipulation 7.4(b) of the Programmatic Agreement, and the Project may be implemented without further Section 106 consultation or review.

The Lahontan Water Board, the CEQA lead agency, provided notice of the Project to tribes who have requested such notice pursuant to Public Resources Code 21080.3.1 (consultation per AB52). Notification to tribes was sent on November 9, 2018. Four comment letters were received, as listed in Section 2.7, Public Involvement. Consultation was not requested, but additional information was provided to tribal groups upon request.

Meeks Meadow in its entirety is a cultural place of significance for the Washoe Tribe, as documented by tribal elders, Washoe Cultural Resource Advisory Council (WCRAC), and historical documents and photographs (SGH 2006). The Washoe Tribal Council, the Tribal Historic Preservation Officer (THPO), WCRAC, and tribal elders were consulted as part of this Project, participated in and provided funding for planning and design, and provided input on the project goals, objectives and Cultural Management Plan (**Appendix A**).

Given the historic use of the project area, there is the potential during ground disturbing construction activities associated with the Project to unearth historical or cultural resources. In addition to a Washoe Tribal monitor being on-site during ground disturbance activities, the implementation of cultural resource RPMs detailed in Section 3.17.14 would reduce potential impacts to tribal resources to a level of less than significant. Specifically, if Native American artifacts and/or human remains are discovered, work in the immediate area of the discovery will stop, and the Wilton Rancheria and the Washoe Tribe of Nevada and California will be notified in accordance with the provisions stated in the Archaeological Resources Protection Act [16 USC 469], Native American Graves Protection and Repatriation Act [25 U.S.C. 3001-30013], California Health and Safety Code section 7050.5, and Public Resources Code section 5097.9. The discovery area will be flagged and protected until the LTBMU Tribal Liaison or representative, a qualified archaeologist, and Wilton Rancheria and/or Washoe Tribal representative, as appropriate, can assess the site.

Environmental Analysis: **Less than Significant Impact.**

Required Mitigation: **None**.

22.0 UTILITIES & SERVICE SYSTEMS

This section evaluates the Project's impacts on utilities and service systems during construction and operations. **Table 26** identifies the level of significance of the impacts based on the CEQA Guidelines Appendix G: Environmental Checklist Form and indicates whether additional mitigation measures would be required to avoid, reduce, minimize, or otherwise mitigate potential impacts to a level of less than significant.

Table 26. Utilities and Service Systems Impacts

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (CEQA XVIIIa)	☐	☐	☐	☒
Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (CEQA XVIIIb)	☐	☐	☐	☒
Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (CEQA XVIIIc)	☐	☐	☐	☒
Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (CEQA XVIIId)	☐	☐	☒	☐
Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (CEQA XVIIIe)	☐	☐	☐	☒
Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? (CEQA XVIIIf)	☐	☐	☒	☐
Comply with federal, state, and local statutes and regulations related to solid waste? (CEQA XVIIIg)	☐	☐	☒	☐

22.1 CEQA Checklist Analysis

CEQA XVIIIa. Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Standard of Significance. Exceedance of wastewater treatment requirements as established by Lahontan Water Board constitutes a significant impact.

As discussed in the analysis for CEQA XIIIa, the Project would not create population growth. The Project proposes no new housing that could increase resident populations in need of these services and does not propose fixtures or features that would require connections to wastewater. The Project would not affect wastewater quantities and would create no impact on wastewater treatment operations, treatment, or capacity. The resulting Project would not discharge additional wastewater to the public sewer system.

Environmental Analysis: **No Impact**.

Required Mitigation: **None.**

CEQA XVIIIb. Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Standard of Significance. Construction of new water or wastewater facilities or expansion of existing facilities as a result of the Project constitutes a significant impact if new construction creates significant and immitigable environmental effects.

The Project area contains no wastewater facilities. As discussed in the analysis for CEQA XIIIa, the Project would not create population growth. The Project proposal includes no new housing that could increase resident populations in need of these services and does not propose fixtures or features (e.g., restrooms) that require connections to water or wastewater. The Project installs no permanent irrigation, restrooms, or water fountains. Therefore, no impact to water or wastewater facilities would result.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA XVIIIc. Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Standard of Significance. Construction of new stormwater treatment facilities or expansion of existing facilities as a result of the Project constitutes a significant impact if new construction creates significant and immitigable environmental effects.

The Project area contains no existing stormwater drainage facilities, and Project implementation and operations would not require or result in the construction or expansion of stormwater drainage facilities. Therefore, no impact to stormwater drainage facilities would result.

Environmental Analysis: **No Impact**.

Required Mitigation: **None.**

CEQA XVIIId. Would the Project have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?

Standard of Significance. A significant impact occurs if the Project creates a demand in water supply that requires new or expanded entitlements or resources to ensure continuation of sufficient water supply to the public.

The Project would require temporary water during implementation for dust control. Water trucks would be filled using designated fire hydrants located in the vicinity of the Project area. Temporary water use during construction would be minimal and would be served through the existing entitlements. Project operations

would utilize existing water supplies during broadcast burning, as necessary, but would not result in the need for new or expanded entitlements. Refer to the analyses for CEQA XVIIIa and CEQA XVIIIb. The Project requires no new water service, and therefore, would avoid significant impact on water supplies, entitlements, or resources.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA XVIIIe. Would the Project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

Standard of Significance. A significant impact results if the Project creates additional demand that prohibits the local public utility district from meeting existing provider commitments with existing wastewater treatment capacity.

Refer to the analyses for CEQA XVIIIa and CEQA XVIIIb. The Project area contains no wastewater treatment facilities, and Project implementation and operations would require no new wastewater service. The Project would result in no impact to Tahoe City Public Utility District's existing capacity and ability to meet existing commitments.

Environmental Analysis: **No Impact.**

Required Mitigation: **None.**

CEQA XVIIIf. Would the Project be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?

Standard of Significance. A significant impact results if the Project creates demand for a new landfill or is unable to be served by existing landfills.

Log hauling, which is the loading and removal of logs from a project site to a facility for further processing off-site, would occur, but the generation of solid waste transported from the Project area would be minimized. Most materials would be lopped and scattered, chipped, or masticated on-site and then broadcast burning would be applied to reduce fuels.

If necessary, solid waste materials would be transported to South Tahoe Refuse for disposal. The main facility, located in the City of South Lake Tahoe, consists of a transfer station, a materials recovery facility, and the Tahoe Basin Container Service. Solid waste could also be disposed of at the Lockwood Regional Landfill in Sparks, Nevada. This landfill has a total capacity of approximately 43 million tons. The Project's potential impact on landfills would be less than significant.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA XVIIIg. Would the Project comply with federal, state, and local statutes and regulations related to solid waste?

Standard of Significance. Non-compliance with statutes and regulations regarding solid waste results in a significant impact as defined by TRPA RPU Goals and Policies, the City General Plan, and state (Title 14 and 27, CCR) and federal solid waste handling and disposal regulations.

The California Integrated Waste Management Act requires every county to adopt an Integrated Waste Management plan that describes county objectives, policies, and programs relative to waste disposal, management, source reduction, and recycling. The removal of solid waste due to proposed Project activities would comply with all federal, state, and local statutes and regulations. Solid waste disposal services/facilities are currently available to accommodate Project-related waste, and potential impacts would be reduced to a level of less than significant through compliance with federal, state, and local statutes and regulations related to solid waste.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

23.0 MANDATORY FINDINGS OF SIGNIFICANCE

This section presents the analyses for mandatory findings of significance. **Table 27** identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Table 27. Mandatory Findings of Significance

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? (CEQA XIXa)	☐	☐	☒	☐
Would 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)? (CEQA XIXb)	☐	☐	☒	☐
Would the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (CEQA XIXc)	☐	☐	☒	☐

23.1 CEQA Checklist Analysis

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

Standard of Significance. Substantial degradation of the quality of the environment constitutes a significant impact.

Potential Project-level impacts to the environment, including habitat for fish and wildlife species, populations of plants and animals, rare and endangered species, sensitive habitats, historical and cultural resources, hydrology, geology, and soils, have been evaluated as part of this IS. Analyses conclude that the Project would not substantially degrade the quality of the environment. The Project would not have the potential to degrade the quality of the environment substantially; reduce the habitat of 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 the number or restrict the range of a rare or endangered plant or animal; or eliminate important examples of the major periods of California history or prehistory.

Potential environmental impacts would be temporary, intermittent, and localized, and would cease after construction. The Project would comply with 2014 Timber Waiver conditions (Section 3.15) and would implement RPMs, as identified throughout Section 3.17 of the Project description, that would minimize the potential for cumulative impacts by installing appropriate measures to minimize stormwater runoff, erosion and sedimentation, and impacts to water quality and vegetation; protect against hazards and hazardous materials; and protect the safety of the public during construction activities.

The Project would not reduce wildlife habitat or species, cause a fish or wildlife species population to drop below self-sustaining levels, or threaten to eliminate a rare or endangered plant or animal; nor would the Project substantially reduce fish habitat or wildlife species density. The overall impact from the Project is intended and anticipated to be beneficial to both the environment and persons affected by the Project.

The Washoe Tribe has collaborated with the Forest Service to plan and design the Project. Through a Stewardship Agreement, the Washoe Tribe will be a Project implementation partner with the Forest Service and through the MOU will continue to operate Meeks Bay Resort and Marina and partner with LTBMU to management the meadow complex, ensuring that the Project would not eliminate important examples of the major periods of California history or prehistory but would instead restore the cultural landscape of Meeks Meadow.

Project impacts during timber management would be limited in size, temporary, and minimized through the implementation of the Project-specific RPMs (Section 3.17) and Timber Waiver conditions (Section 3.15). Overall, the Project would improve meadow functions and the overall ecosystem within the Meeks Meadow complex to result in less-than-significant impacts to these stated resources.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA XIXb. 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)?

Standard of Significance. When the Project's incremental contribution is "cumulatively considerable" to the environmental resource, a significant impact could result. The projects that could have a cumulative impact on the resources in the Project area when considered incrementally with the Project are referred to as "related projects."

Two approaches to a cumulative impact analysis are provided in CEQA Guidelines. Section 15130(b)(1): (1) the analysis can be based on a list of past, present, and reasonably foreseeable probable future projects producing closely related impacts that could combine with those of a project, and (2) a summary of projections contained in a general plan or related planning document can be used to determine cumulative impacts. The following factors were used to determine an appropriate list of individual projects to be considered in this cumulative analysis:

- Similar Environmental Impacts: A relevant project contributes to effects on resources that are also affected by the proposed Project. A relevant future project is defined as one that is "reasonably foreseeable," such as a project for which an application has been filed with the approving agency or whose funding has been approved.
- Geographic Scope and Location: A relevant project is one within the geographic area where effects could combine. The geographic scope varies on a resource-by-resource basis. For example, the geographic scope for evaluating cumulative effects on air quality consists of the affected air basin.

- Timing and Duration of Implementation: Effects associated with activities for a relevant project (e.g., short-term construction or long-term operations) would likely coincide with the related effects of the proposed Project.

Table 28 identifies a list of past, present, and reasonably foreseeable future projects that have occurred or are planned to occur in the vicinity of the Project area. The table identifies the name of the related project, a brief description, project status, agencies contacted, and documents referenced. The present or reasonably foreseeable, probable future projects considered in this cumulative analysis are those projects located in the western portion of the Lake Tahoe Basin in El Dorado and Placer Counties and that have been identified as having potential effects on environmental resources that could also be affected by the Project. **Table 28** identifies the related projects in the cumulative effects analysis based on these following criteria:

- The project is reasonably foreseeable, because it has an identified lead agency, and has initiated CEQA, TRPA, and/or NEPA environmental review or other regulatory procedures.
- The information available defines the project in adequate detail to allow meaningful analysis.
- The project could affect resources potentially affected by the Project.

Table 28. List of Related Projects – Lake Tahoe Basin, Meeks Bay, California

Agency/Applicant	Project Title	Description	Status
LTBMU	Verizon Wireless	New authorization for cell equipment on ground next to Tahoe City Public Utility District Meeks Bay water tank. Meeks Bay, CA.	Current Expected completion 06/2019
LTBMU	Liberty Energy	Ongoing maintenance and repair of existing facilities	Ongoing
LTBMU	NV Energy	Ongoing maintenance and repair of existing facilities	Ongoing
LTBMU	PG&E	Renewal of master special use permit. Permit will be issued by the Eldorado National Forest and will include the small portion that is located on the LTBMU, El Dorado County, CA	Ongoing
LTBMU	El Dorado County	Renewal of special use permits for erosion control facilities located on the LTBMU, El Dorado County, CA	Ongoing
LTBMU	Mountain Bike Trail Around the Lake	This project would analyze the construction of key linkages that are currently missing on west and north shores for a non-motorized trail network that circumnavigates the lake for pedestrians and mountain bikes on NFS lands on west and north shores of Lake Tahoe	Planning Phase
LTBMU	Urban Forest Defense Zone Fuels Reduction and Healthy Forest Project	Programmatic treatments to address ongoing fuels and forest health needs on NFS urban forest parcels and within WUI Defense Zone. This EA will update and replace the current Urban Lots EA.	Planning Phase Expected Implementation 05/2021
LTBMU	Meeks Bay Resort Roads BMP Retrofit	Retrofit and/or reconfigure roads with water quality protection BMPs. Environmental analysis (NEPA), design, and implementation	Completed 2009-2012

Table 28. List of Related Projects – Lake Tahoe Basin, Meeks Bay, California

Agency/Applicant	Project Title	Description	Status
		of water quality retrofit improvements at the resort involved development of a site-specific proposed action for activities at the Kehlet House and other areas of the resort adjacent to the waters of Lake Tahoe.	
LTBMU	Meeks Bay Restoration Project	The deteriorating condition of the existing marina infrastructure, along with concerns over water quality, aquatic invasive species, and degraded habitat for native species have prompted the need for action in Meeks Bay. The purpose of this project is to move the Meeks Creek stream channel and wetland/lagoon below SR 89 to a more natural condition where geomorphic and hydrologic processes support a functioning ecosystem while continuing to support sustainable recreation opportunities. The project includes restoration of Meeks Creek in Meeks Marina, removal of the marina, construction of a pier and new boat ramp, and reconstruction of Meeks campground, BMPs, pedestrian bridge over Meeks Creek, pathways, beach access, parking improvements, AIS station, and utility upgrades.	Current Scoping Period Expected Duration 2016-2017
LTBMU	Meeks Bay Resort Roads BMP Retrofit	Retrofit and/or reconfigure roads with water quality protection BMPs. Environmental analysis (NEPA), design, and implementation of water quality retrofit improvements at the resort involved development of a site-specific Proposed Action for activities at the Kehlet House and other areas of the resort adjacent to the waters of Lake Tahoe.	Completed 2012
LTBMU	Lake Tahoe West	Healthy forests and watershed planning at a landscape scale on the west shore of Lake Tahoe for management of wildlife, fish, rare plants, forest products, fuels, and watershed.	Current Expected Implementation 05/2020
LTBMU	West Shore Hazardous Fuels Reduction and Ecosystem Restoration	Conduct hazardous fuel reduction and forest ecosystem health treatments for the Ward and Quail Projects on the west shore of the Lake Tahoe Basin (3,477 acres). These fuel reduction treatments cover the National Forest areas and focus on the urban wildland interface. These treatments reduce the level of hazardous fuels within the defense and threat zones. This includes the use of mechanical harvesters and chainsaws for thinning to reduce live tree densities and mechanical chipping to reduce the amount of existing dead and down biomass.	Completed 2011

Table 28. List of Related Projects – Lake Tahoe Basin, Meeks Bay, California

Agency/Applicant	Project Title	Description	Status
		Included in project implementation was contract administration and project monitoring.	
LTBMU	Winter Recreation and Travel Management (Over the Snow)	The project designates roads, trails, and areas where over the snow use is allowed in accordance with Subpart C of the Travel Management Rule. It also includes project-level snow-play areas, plow & expand parking lots, and grooming for over the snow and non-motorized trails (LTBMU Forest Plan)	Planning Phase Expected Implementation 10/2020
LTBMU	Meeks Bay AIS Plant Control and Monitoring	In 2015, the AIS Implementation Plan and associated action list prioritized projects for AIS control. Meeks Bay Marina is prioritized in the plan because Eurasian watermilfoil and warm-water fish occupy this habitat in the marina. This project would focus on removal of the Eurasian watermilfoil infestation and associated monitoring.	Current Expected Implementation through 2021
LTBMU	Meeks Bay Highway Corridor Improvements	This project includes formalized and upgraded parking access to the wilderness at Meeks Bay trailhead, constructing new multi-use bike path and bridge and other associated facilities at Meeks Bay Resort, and BMPs.	Planning Phase
El Dorado County	CSA#5	The CSA#5 Erosion Control Project (Project) is a water quality improvement project initiated to address water quality and erosion problems within the urbanized areas of Tahoma, in El Dorado County. The project supports TRPA's Environmental Improvement Program (EIP) through the design and installation of low-impact BMPs. The Project is located in Tahoma on the west shore of Lake Tahoe, and is bounded by Lake Tahoe and First Avenue to the east, the El Dorado/Placer County line to the north, Chinkapin Road and Placer Street to the west, and Cedar Street to the South. The project area is also located within TRPA-designated Priority 2 Watershed 56 (General Creek).	Completed 10/2018
El Dorado County	Urban Upland TMDL Implementation	This project will capture El Dorado County's progress toward implementation of the TMDL. Fine sediment particle, nitrogen, and phosphorus load reductions are collected and reported by El Dorado County on a jurisdiction level, not a project level. This project will only report FSP, nitrogen, and phosphorus and will not include expenditure data. Expenditure data will be reported on a project-level with individual projects reporting expenditures for that project.	Planning Phase

Table 28. List of Related Projects – Lake Tahoe Basin, Meeks Bay, California

Agency/Applicant	Project Title	Description	Status
El Dorado County	Forest View Water Quality Improvement	The Forest View Water Quality Project is within the Rubicon Properties Unit No. 2 subdivision, which is bordered by Lonely Gulch to the north, Woodland Drive to the east, Highland Drive to the south, and the Forest View to the west. As part of a previously constructed water quality project most sources of erosion in the area were addressed but it had minimal treatment and also helped to connect the stormwater flows to Lonely Gulch. The main goal of this project is to reduce the very fine and fine sediment that will improve the clarity of Lake Tahoe.	Completed 2016
El Dorado County	Rubicon 5 Erosion Control	The Rubicon 5 Erosion Control Project (ECP) was one of the last ECPs within this region. There have been 7 ECPs built in this area: Victoria Drive, Rubicon (1-4), Mountain Drive, Woodland, Tamarack, Silvertip, and Lonely Gulch. The problems addressed by this project include the following: a. Direct discharges of runoff into Lake Tahoe. Eroding cut slopes, drainages, and roadside ditches. b. Road sand/cinder accumulation on roads and discharge into drainages. c. Bare shoulders used as parking turnouts. d. Inadequate private BMPs.	Completed 2011
El Dorado County	Tahoe Hills Stormwater Management/Erosion Control	The Tahoe Hills Erosion Control Project is within the Tahoe Hills subdivision which is bordered by SR 89 to the north and south, and by Lake Tahoe to the east. The project area encompasses County right-of-way, Caltrans right-of-way, California Tahoe Conservancy, Forest Service, and privately owned property. The main goal of the Project is to reduce the very fine and fine sediment from the Tahoe Hills subdivision. which will ultimately improve the clarity of Lake Tahoe.	Completed 2018 Post-project monitoring and maintenance ongoing
Placer County	Homewood Erosion Control	This project involved treatment of stormwater and slope stabilization through revegetation, rock slope protection, retaining walls, curb and gutter, and sediment basins. Catchment and treatment of sediment was needed. Location: San Souci Terrace and Sacramento Avenue between Fawn Street and Tahoe Ski Bowl.	Completed 2012
Placer County	Tahoma Roads Water Quality	In partnership with El Dorado County, right-of-way stormwater runoff in the Tahoma neighborhood will be addressed. This	Current

Table 28. List of Related Projects – Lake Tahoe Basin, Meeks Bay, California

Agency/Applicant	Project Title	Description	Status
		watershed crosses county lines and will be coordinated with El Dorado CSA5 Project.	Expected Implementation through 2019
Caltrans	SR 89 Water Quality Improvement – Eagle Falls Viaduct to Meeks Creek	This project was located near South Lake Tahoe, from north of Eagle Falls Sidehill Viaduct to Meeks Creek. Steep slopes and narrow roadway in vicinity of Emerald Bay. The project reconstructed drainage system and constructed stormwater improvements throughout the project area; incorporated erosion control measures on unvegetated slopes within the state right-of-way; and paved existing unsurfaced pullouts and driveway connections. Length = 6.9 miles. Post Mile 18.0 to PM 24.9. Caltrans EA 1A844	Completed 2015
California Tahoe Conservancy	Meeks Bay Urban (Forestry)	Meeks Bay Urban forest health project treatment of 15 acres.	Completed 2012
California Tahoe Conservancy	Lakeview Fuel Reduction	Forestry - Lakeview Fuel Reduction is approximately 12 acres of forest health and fuels reduction work on the west shore of Lake Tahoe. The Lakeview forestry project involves cutting of trees that were marked under the guidance of an RPF for forest health and fuel reduction efforts. The project was implemented by hand crews cutting designated trees and brush. The project is split into two phases, the first being the cutting of designated trees and brush and the second being the burning of the piles. The project is located in the west shore of Lake Tahoe.	Current Expected Implementation through 2023
California Tahoe Conservancy	Meeks Bay Urban Forestry	Meeks Bay urban forest health project treatment of 15 acres	Completed 2012
California Department of Parks and Recreation	D.L. Bliss State Park Gateway Hazardous Fuels Reduction	Forest thinning with hand crews and prescribed fire will be implemented to reduce hazardous fuels and enhance residual tree species health. This project is designed to reduce tree densities in order to modify fire behavior to reduce the potential for a catastrophic, stand replacement fire. Forest thinning with hand crews will reduce ladder fuels and overcrowded/diseased trees and enhance forest health. Thinned trees and dead and downed woody debris will be piled throughout the spring, summer, and fall months and burned in the fall/winter.	Current Expected Implementation through 2019
California Department of Parks and Recreation	D.L. Bliss State Park	BMP retrofits for public and private facilities was completed in 2009. Ongoing seasonal operations and maintenance of the State Park continue.	Ongoing

Table 28. List of Related Projects – Lake Tahoe Basin, Meeks Bay, California

Agency/Applicant	Project Title	Description	Status
California Department of Parks and Recreation	Sugar Pine State Park Ehrman Mansion Pier Repairs	Ehrman Mansion pier repairs and maintenance	Planning Phase
California Department of Parks and Recreation	Glenridge Defense Zone Fuels Reduction	Fuels were treated along Sugar Pine Point State Park boundary and the adjacent Glenridge residential subdivision. Thirty-seven acres of forest was thinned and resulting forest debris piles were burned.	Completed 2009
California Department of Parks and Recreation	Sugar Pine State Park Hazardous Fuels Reduction Phase 1	The SNPLMA Round 14 and Round 16 project will thin forest stands and reduce fire fuels on 108 acres of Sugar Pine Point State Park. This project is designed to reduce tree densities in order to modify fire behavior to reduce the potential for a catastrophic, stand replacement fire and increase the protection of life and property. Forest thinning with hand crews on 55 acres will reduce ladder fuels and overcrowded/diseased trees and promote the growth of large resilient residual trees. Thinned trees and dead and downed woody debris will be chipped or piled to burn. 53 acres of this project will be treated with understory prescribed fire.	Current Expected Implementation through 2020
Homewood Mountain Resort	Homewood Mountain Resort Master Plan Implementation	Phase 1 – North Base: Mid-mountain day lodge, hotel/lodge, day skier services building and residential units, commercial and landscape/ice pond area, workforce housing and day skier parking structure, and LEED commissioning; residential building adjacent to SR 89; residential building adjacent to SR 89 Phase 2 – South Base: residential building (southern); residential building (northern); townhomes (access from south base, situated west/southwest of North Base) Support facilities and environmental improvements: Phase 1 - All permanent BMPs installed as construction is completed, satellite parking and shuttle services initiated, forest health and fuels reduction project continue, and Cumulative Watershed Effects (CWE) initiated, scenic enhancement strategies are employed; Continued on-mountain revegetation and erosion control work continues. Phase 2 - All permanent BMPs installed as construction is completed; project area is fully BMPed, landscaped, and revegetated.	Current Expected Implementation through 2028

The Project's potential impacts, in addition to being avoided, reduced, minimized, or otherwise mitigated through implementation of the RPMs and through compliance with the Timber Waiver conditions, are related to timber management activities and are therefore, temporary and intermittent. The Project would pose no impacts that are individually limited, and as a result would not contribute toward cumulatively considerable impacts when viewed in connection with the effects of past, current, or probable future projects in the Project area vicinity. The projects listed in **Table 28** primarily represent actions identified by the TRPA EIP for environmental threshold improvements. Projects in the vicinity of the Project area implement or have implemented actions to: improve roadways, scenic resources, slope stability and stormwater drainage; reduce fuel loads and risk of catastrophic wildfire; promote recreational resources and access; and like the Mayala Wata Restoration Project at Meeks Meadow, restore ecosystem, watershed and habitat functions. Design features and a variety of RPMs and plans have been appropriately and adequately identified and incorporated into the proposed Project to ensure that the individual Project impacts would be avoided or reduced to a level of less than significant and would not be cumulatively considerable.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

CEQA XIXc. Would the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Standard of Significance. Project environmental effects that cause direct or indirect substantial adverse effects to humans create a significant impact.

As discussed in this IS, the Project would not cause substantial adverse effects on human beings, either directly or indirectly. Project implementation and operation would not include uses such as increased demand for utilities, increased recreational facilities, or increases in transportation that would result in substantial adverse effects on human beings. Broadcast burning may require short-term and temporary closure of the Project area for protection of public health and safety and would not be considered a substantial adverse effect. Such closures will be appropriately noticed on the LTBMU website and social media pages, and closure noticing and signage will be installed at trailheads to avoid significant impacts to recreational use.

Broadcast burning will produce some smoke. Prior to prescribed fire applications, LTBMU fire management staff will prepare a Burn Plan that includes a Smoke Management Plan and closely coordinate with the El Dorado County AQMD, the agency that issues the Burn Permit. Before burning, crews wait for favorable conditions that will carry smoke up and disperse it away from smoke sensitive areas. Crews also conduct test burns before igniting larger areas to verify how effectively vegetation is consumed and how smoke will travel. When conditions meet the prescription, a Burn Permit is issued, allowing operations to proceed. Smoke from prescribed fire operations is normal and may continue for several days after an ignition.

Since 1997, over 2,000 acres of landscape underburns and over 8,000 acres of prescribed pile burning has been implemented on the LTBMU. In these areas, surface fuels have been reduced and smaller live trees thinned, creating a zone where a damaging crown fire is less likely, which provides for safer environment for residents, visitors, and firefighters. Prescribed fire smoke is generally less intense and of much shorter duration than smoke produced by a wildland fire. Smoke-sensitive individuals will be encouraged to reduce exposure by staying indoors in a smoke-affected area. The Forest Service also provides smoke management tips at https://airnow.gov/air-quality-and-health/fires-and-your-health.

Potential Project impacts are considered temporary and intermittent and measured to be either less than significant or resulting in no impact. The intent of the Project is to restore the historic riparian, aquatic, and

wetland function of the meadow system within the Meeks Meadow complex. As such, the Project would not cause any adverse effects to the environment and would not result in environmental effects with substantial adverse direct or indirect effects on human beings.

Environmental Analysis: **Less than Significant Impact**.

Required Mitigation: **None.**

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Mayala Wata Restoration Project at
Meeks Meadow
Initial Study/Negative Declaration

APPENDIX

A

CULTURAL MANAGEMENT PLAN

Máyala Wata
Restoration Project at Meeks Meadow
Cultural Management Plan

Prepared by:
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Document Information

This document was prepared by the Washoe Tribe's Environmental Protection Department (WEPD) with funding received from a California State Prop 1 Planning Grant through the California Tahoe Conservancy (CTC) and a Tribal Wildlife Grant through the United States Fish and Wildlife Service (USFWS).

This document was has been prepared collaboratively in partnership and collaboration with the Washoe Tribal Council and Community Councils, the Washoe Cultural Resource Advisory Council, the Washoe Elder Advisory Council, and the United States Forest Service (USFS) Lake Tahoe Basin Management Unit (LTBMU), with technical support from Cardno, Inc.

For additional details related to the assessment of ecosystem conditions, history, and complexities of vegetation communities at Meeks Meadow, please refer to the Meeks Creek Watershed Ecosystem Assessment Report (Swanson Hydrology + Geomorphology [SHG] 2005) and the Meeks Meadow Restoration and Management Plan (SHG 2009). The goal of the Cultural Management Plan is to build on assessments of the Ecosystem Assessment Report and Restoration and Management Plan (SGH), document baseline cultural vegetation information, and include management recommendations with an emphasis on historic Washoe cultural management objectives, techniques, and practices.

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1 Restoration Vision

The Máyala Wata Restoration Project empowers the Washoe Tribe to reintroduce historic cultural land management practices back into the Lake Tahoe Basin through a robust partnership with Federal, state, and non-profit agencies. The project will restore culturally significant flora and fauna, important to the Washoe Tribe, that mimic pre-European conditions. This innovative project will serve as a model for future large-scale conservation efforts utilizing Traditional Ecological Knowledge (TEK).

Historically, the Tribe's participation has been limited to primarily a 'consultation' role for projects at Lake Tahoe, which diminishes the Tribal legacy and history of environmental management of their aboriginal lands. This project will develop a template for increased Tribal involvement in and around the Tahoe Basin. The Washoe Tribe is committed to working collectively and collaboratively with other agencies for the common goal of environmental conservation, stewardship, and sustainability. The name "Máyala Wata" acknowledges the Washoe name for Meeks Creek, which was utilized long before the introduction of the Euro-American name.

This management plan aligns with the Purpose and Need statement of the Decision Memo for Implementation of the Meeks Creek Meadow Ecosystem Restoration Project (USDA 2013), while adding a vital cultural component. Maintaining and enhancing the Washoe Tribal legacy at Lake Tahoe is an important step in collectively planning for future environmental and climate change resiliency. The Tribe has thousands of years of history and effective stewardship experience of resource allocation and environmental management within the Lake Tahoe basin. The planning and future restoration efforts will allow for the expansion and improvement of quality natural areas on aboriginal lands, allowing Tribal Elders to share TEK of cultural plants and environmental practices with the youth, Tribal members, and Agency partners. The implementation of this project and subsequent cultural management will demonstrate the efficacy of TEK in the restoration and management of ecosystems and continue to incorporate on-going Tribal participation.

2 Introduction

2.1 Landscape Setting and Scope

Meeks Creek and Meeks Meadow is located within the LTBMU Meeks Management Area on the western shore of Lake Tahoe in El Dorado County, California (Figure 1). Meeks Creek originates on the eastern slopes of the Sierra Nevada crest, in granitic bedrock through steep terrain that are currently part of Desolation Wilderness. Meeks Creek enters the flat valley floor and wet meadow complex of Meeks Meadow as it flows towards it's terminus at Lake Tahoe. The flat valley of Meeks Meadow is approximately 300 acres and is bound by slopes rising between 400-1000', resulting in a distinct meadow outline.

This vegetation management plan and recommended implementation actions are limited to the meadow area west of Highway 89. Although the downstream section of Meeks Creek, including the Meeks Bay Marina and Highway 89 bridge area, would benefit from restoration, as it's condition is highly degraded, incised, and there is no appropriate fish passage between the creek and the meadow due to the current Highway 89 bridge. Restoration actions to Meeks Creek east of the bridge will be considered under a separate restoration and management plan, taking into account the actions recommended here.

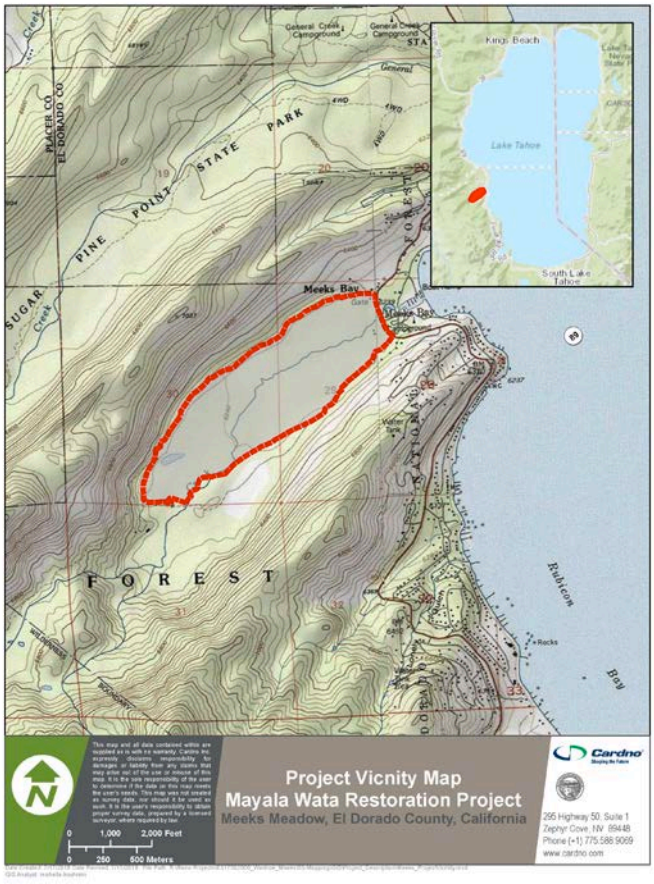

Figure 1 - Project Vicinity Map

2.2 Tribal Land Use History

The creation story of the Washoe people took place at Lake Tahoe. As such, the Washoe people were the first human inhabitants of the Lake Tahoe region. Meeks Meadow served as a historic summer camp for Washoe people, utilized for hunting and the gathering and cultivation of foods, medicines, and basket-making materials. Cultural, sustainable management of the meadow was practiced by Washoe in the meadow prior to European-American arrival. Historically, the open meadow character of Meeks Meadow was maintained by Washoe people and natural processes, including periodic intentional burning, pruning, weeding, cleaning, digging, and natural fire occurrences. The adjacent creek and bay were utilized for fishing, cultural, and ceremonial purposes. Meeks Meadow and Bay continue to be a valuable cultural and environmental asset to the Tribe. Currently, the Meeks Bay Resort, which is on National Forest Service Land, is operated by the Washoe Tribe, under a special use permit administered by the USFS LTBMU. Cultural function of the meadow has declined over the years due to meadow drying and replacement of culturally-significant vegetation with invasive conifers. As today's climate is similar (although changing), to pre-Euro-American settlement climate, it's assumed that land-use and land-management changes are largely responsible for the changes in ecological function and character of the meadow.

Additional details of Washoe Tribal history at Lake Tahoe and Meeks Meadow are discussed other documents and reports. This document is not intended to catalogue the past history of Tribal presence or management at Meeks Meadow, rather is intended to use cultural and historical knowledge to develop an adaptive management plan to move forward with restoration and future Tribally-driven management at Meeks Meadow.

2.3 Euro-American Introduction and Present Day Land Use History

European exploration in and around Lake Tahoe began in 1844. Meeks Meadow began to be utilized for pasture and grass hay shortly after. In the recent past, the Meeks Creek watershed has experienced logging, cattle grazing, and fire suppression. Timber was harvested from 1875-1895 on the western side of Lake Tahoe. Cattle actively grazed the meadow through the 1930's, and meadow hay was produced and harvested during that time. Fire suppression since 1900 has also precipitated tree encroachment, resulting in lodgepole pine (*Pinus contorta*) encroachment into the meadow. Bracken fern (*Pteridium aquilinum*) and other water filtering plants have declined as a result of fire suppression.

2.4 Restoration Purpose and Need

The primary purpose of this project is to restore Meeks Meadow using pre-European conditions for reference while managing for resiliency to prepare for uncertain future conditions. The intent of the project is to restore the ecological and hydrological function of Meeks meadow, which will in turn prepare these systems for natural disturbances in the future. Pre-European conditions are considered those prior to Comstock logging, livestock grazing, mining, and fire suppression, during the time when the Washoe people actively utilized and culturally managed the meadow resources. Restoration to this condition does, however, recognize that other potential impacts including, but not limited to, climate change and current land use would prevent some historic characteristics from being fully restored. This restoration approach supports adaptations to changing future conditions, such as changing climate. Additional needs for the project include demonstrating the ability of the Washoe Tribe, Federal partners, and other stakeholders to collaborative manage the meadow and associated resources and improve Tribal connection to Meeks Meadow through outreach and educational activities.

The needs for the Project are to:

- Restore physical (hydrological) and biological (terrestrial and aquatic diversity and abundance), and ecological meadow processes (evapotranspiration) and functions (flow dispersal, ground water recharge, sediment detention) that are appropriate for the current climate regime and comparable to reference conditions.
- Restore natural fire disturbance regime in Meeks Meadow to enhance riparian habitat for native riparian dependent species, increase meadow acreage, improve plant diversity and vigor, provide habitat for native species, increase water availability for wetland species, and provide wetter conditions for a longer duration each year.
- Provide diverse wildlife habitat for native riparian dependent species, which is currently limited within the Lake Tahoe basin due to past land management activities.
- Move the project area toward a pre-fire suppression vegetative condition related to stand density, tree size class, and species composition to enable the reintroduction of fire into a fire adapted ecosystem.
- Reduce the potential for a catastrophic wildland fire and provide for defensible space adjacent to communities.
- Demonstrate the Efficacy of TEK and Tribal land management collaboration and ability.
- Improve Washoe connections to aboriginal lands.

Meadows play important roles in hydrology, erosion control, nutrient cycling, provision of wildlife habitat, cultural indigenous practices, and human recreation. Meadow drying in the Lake Tahoe basin is a significant form of landscape change, often caused by lowering of the local groundwater table. (Wagoner 1986, Ratliff 1985). Due to their high sensitivity to drying, montane meadows have been suggested as early indicators of environmental changes associated with climate change (Debinski et al. 2004). The water table of Meeks Meadow has declined over the years due to increases in conifer cover and subsequent water uptake. Changes of inter-annual variability of climate, combined with fire suppression after the European settling of the Tahoe basin, are factors that have contributed to the invasion of Meeks Meadow by native lodgepole pine and other upland conifer species. These conifers are now moving further into the meadow and creating pockets of upland habitat within the meadow: reducing water availability for meadow and riparian vegetation, lowering the meadow groundwater table, reducing the meadow's resiliency to drought, degrading the habitat conditions for riparian dependent species, thus reducing the ability of the Washoe people to use the meadow in a culturally historic manner. Meadow drying has been observed to cause the replacement of native wetland perennials with non-native annuals (Burcham 1970, Hagberg 1995) and upland species, and conifer invasion of the meadow increases the meadow's vulnerability to catastrophic fires. Meadow restoration via removal of conifers is a major focus in the Lake Tahoe Basin, and a combination of conifer removal treatments followed by prescribed fire can be used to maintain meadow health.

Maintaining and enhancing the Washoe Tribal legacy at Lake Tahoe is an important step in collectively planning for environmental and climate change resiliency, and an important step in improving connections to aboriginal lands. The Máyala Wata Restoration Project will not only improve the function and condition of the meadow, but through reintroducing valuable cultural management practices to the ongoing management of the meadow, Washoe connection, management, and stewardship of aboriginal lands will be improved and highlighted.

2.5 Federal Acknowledgement of TEK

The US Federal Government's Department of the Interior implements the US Fish and Wildlife Service Native American Policy (Policy), which was developed and adopted to help accomplish the agency's mission and concurrently to participate in fulfilling the Federal Government's and the Department of the Interior's trust responsibilities to assist Native Americans in protecting, conserving, and utilizing their reserved, treaty guaranteed, or statutorily identified trust assets. This Policy is consistent with Federal policy (Secretarial Order 3206, Sections 4 and 5) supporting Native American government self-determination.

The Policy directs the consideration of Traditional Ecological Knowledge in federal land planning documents. This policy recognizes that the rich body of ecological knowledge that Tribes possess has the potential to improve scientific understanding and the management of public lands (Noyes 2015). The term Traditional Ecological Knowledge, or TEK, is used to describe the knowledge held by indigenous cultures about their immediate environment and the cultural practices that build on that knowledge. Traditional ecological knowledge includes an intimate and detailed knowledge of plants, animals, and natural phenomena, the development and use of appropriate technologies for hunting, fishing, trapping, agriculture, and forestry, and a holistic knowledge, or "world view" which parallels the scientific discipline of ecology (Berkes 1993).

The partnership between the Forest Service and the Washoe Tribe has tasked the Tribe to prepare and implement a cultural management plan for the long term implementation of TEK restoration at Meeks Meadow of hydrological, biological and ecological meadow processes and functions. The 2013 NEPA Decision Memo for this project requires the development of a maintenance plan for the long-term maintenance of the meadow and unforeseen needs. This document serves as the maintenance plan for the meadow, and alongside monitoring data, is intended to assist project partners in determining future prescribed broadcast burn needs, supplemental hand treatments, revegetation and/or reseeding requirements, and other TEK management methods needs. This plan serves a living document intended to guide cultural management at Meeks Meadow and is contingent on updates should additional information arise.

3 Goals and Objectives

The goals and objectives of this plan complement the purpose and need for the project, as defined in the 2013 Decision Memo for the project. However, the goals and objectives here incorporate cultural management practices as a means of complementing or substituting western restoration practices, while reaching the same desired outcome. Figure 2 includes the delineation of the pre-project (2017) vegetation communities

3.1 Goal 1: Restore Meadow Function and Condition

Objective A: Reduce conifer density and cover within the forested vegetation community groups.
Western management technique: conifer removal/thinning, prescribed broadcast burning.
Monitoring measures included in the LTBMU Conifer Monitoring Plan (Appendix A).

Objective B: Increase groundwater levels in meadow and riparian vegetation community groups.
Western management technique: conifer removal/thinning, prescribed broadcast burning.
Cultural/adaptive management technique: periodic cultural (broadcast) burning.
Monitoring measures included in the LTBMU Conifer Monitoring Plan (Appendix A).

Objective C: Decrease the size of the lodgepole pine forest community. Increase the size of the mixed riparian scrub, wet meadow, and dry meadow communities. Target size increases/decreases and target dates will be determined following the results of baseline monitoring.
Western management technique: conifer removal/thinning, broadcast burning.
Cultural/adaptive management technique: periodic cultural (broadcast) burning.
Monitoring measures included in the Washoe Cultural Monitoring Plan (Appendix B).

Objective D: Increase the density/frequency of the below culturally-significant plants (Table 1) within their respective vegetation communities. Target density/frequencies increases and target dates will be determined by results of baseline monitoring. Maintain density increases in subsequent years. Decreases in density will trigger cultural management measures. Other culturally-significant native plants (Appendix C) may be planted, seeded, or managed for depending on availability and specific Tribal needs, but may not be included in monitoring.
Cultural/adaptive management technique: collection/trimming, planting, seeding, tilling, digging.
Monitoring measures included in the Washoe Cultural Monitoring Plan (Appendix B).

Table 1 - Washoe culturally-significant plants targeted for management and monitoring

Scientific Name	Washoe Name	Common Name	Meeks Meadow Vegetation Community	Cultural Management Techniques
Achillea millefolium	wemši?	yarrow	mixed conifer forest (dry meadow understory), wet meadow, dry meadow	Cultural burning, collection, planting, seeding
Allium sp.	bošdi	wild onion	mixed riparian scrub, wet meadow, dry meadow	Cultural burning, collection, planting, tilling, digging

Alnus incana	sidumim	mountain alder	mixed riparian scrub	Collection, trimming, planting
Fragaria virginiana	mu·ʔaluŋi	mountain strawberry	wet meadow, dry meadow	Cultural burning, collection, planting, tilling, digging
Pteridium aquilinum	megi·geš	braken fern	mixed conifer forest (dry meadow understory), mixed conifer forest (mixed conifer understory)	Cultural burning, collection, tilling, digging
Salix sp.	himu	willow	mixed riparian scrub, wet meadow	Collection, trimming, planting
Calocedrus decurrens	ʔitmahawaʔ	incense cedar	mixed conifer forest (dry meadow understory), mixed conifer forest (mixed conifer understory)	Cultural burning, collection, seeding
Sambucus sp.	ba·duʔ	elderberry	mixed conifer forest (mixed conifer understory), mixed riparian scrub	Collection, trimming, planting
Sarcodes sanguinea	geweʔmukuš	snow plant	mixed conifer forest (dry meadow understory), mixed conifer forest (mixed conifer understory)	Cultural burning, collection, tilling, digging
Rosa woodsia	pećumeliʔ	Woods' rose	mixed conifer forest (mixed conifer understory), mixed riparian scrub	Collection, trimming, planting

Objective E: Prevent the introduction and spread of the species on the LTBMU Invasive Plants of Management Concern list (Appendix D).
Cultural/adaptive management technique: monitoring, planting, seeding, digging.
Monitoring measures included in the Washoe Cultural Monitoring Plan (Appendix B).

3.2 Goal 2: Demonstrate Efficacy of TEK and Tribal Land Management Collaboration and Ability

Objective F: Continue post-project cultural monitoring and share results with LTBMU following each scheduled monitoring event. Collaborate with LTBMU on cultural/adaptive management desires/recommendations based on monitoring results.
Cultural/adaptive management technique: monitoring, collaboration
Monitoring measures included in the Washoe Cultural Monitoring Plan (Appendix B).

Objective G: Present outcomes of Máyala Wata Restoration Project and on-going management issues and adaptive efforts at events, such as Bi-State TEK Summit, Tahoe Summit, Wa-She-Shu-It'-Deh, and other Tribally-specific events, at a minimum of one internal Tribal event per year and one external event per year, for five years post-project implementation.
Cultural/adaptive management technique: collaboration, outreach, education
Monitoring measures included in the Washoe Cultural Monitoring Plan (Appendix B).

Objective H: Update and continue the renewal of MOUs/Cooperative Agreements for collaborative cultural management of Meeks Meadow with LTBMU for foreseeable future. Provide education to Tribal leadership regarding MOU/Cooperative Agreement as needed.
Cultural/adaptive management technique: collaboration, outreach, education
Monitoring measures included in the Washoe Cultural Monitoring Plan (Appendix B).

Objective I: Continue to seek ongoing funding for post-project cultural monitoring, as needed, based on initial funding available for monitoring and monitoring schedule.
Cultural/adaptive management technique: collaboration, outreach
Monitoring measures included in the Washoe Cultural Monitoring Plan (Appendix B).

3.3 Goal 3: Improve Tribal Connection to Aboriginal Lands and Meeks Meadow through Outreach and Educational Activities

Objective J: Increase Tribal interaction with the meadow through scheduled events, such as guided management workshops, crew workdays, youth educational events, elder luncheons, and other such events, at a minimum of two events per year, for five years post-project implementation.
Cultural/adaptive management technique: outreach, education
Monitoring measures included in the Washoe Cultural Monitoring Plan (Appendix B).

Objective K: Continue to seek ongoing funding for education activities and support, as needed, based on initial funding available for educational and outreach activities.
Cultural/adaptive management technique: collaboration, outreach
Monitoring measures included in the Washoe Cultural Monitoring Plan (Appendix B).

4 Existing Meadow Vegetation Communities

Meeks Meadow has a wide range of vegetation community groups, from mixed conifer communities along the meadow edges to emergent wetlands. Fire suppression (due to both recent federal land management practices and lack of historic Washoe cultural management) have allowed for invasive lodgepole pine trees to colonize meadow areas. Invasion by lodgepole pine trees, which are tolerant to periodic water inundation and saturated soils, have decreased the size of vegetation communities and associated species that have value to the Washoe people. For additional details related to the complexities of vegetation communities at Meeks Meadow and riparian and meadow community composition, refer to the Meeks Creek Watershed Ecosystem Assessment Report (Swanson Hydrology + Geomorphology [SHG] 2005).

Prior to the implementation of the Máyala Wata Restoration Project, existing vegetation communities in the project area were surveyed and mapped (Figure 2). This baseline vegetation mapping assisted with the development of goals and objectives, determination of focal culturally-significant vegetation species, and serves as a baseline for monitoring future changes of the desired communities that support culturally significant plant species. Existing vegetation of the project area was last mapped in 2005 by Swanson Hydrology + Geomorphology (SHG 2005). Comparison of the 2005 vegetation community mapping with the 2017 mapping provides valuable information about the rate and location(s) of recent changes and trends in vegetation community boundaries, particularly lodgepole pine forest, which has expanded noticeably since the 2005 mapping.

Throughout this document, plant species are referenced using common names, although Latin botanical names will be indicated for the first reference of an individual species or genus.

4.1 Vegetation Community Types and Classification

To provide consistency for long-term comparisons, the 2017 mapping effort applied the same classification scheme as that used by SHG in 2005, rather than the California Wildlife Habitat Relationship (Mayer and Laudenslayer 1988) or CalVeg (Matyas and Parker 1980) classification systems. Future mapping efforts should following similar classification schemes and protocols, to aid in meaningful comparisons overtime. For the Máyala Wata Restoration Project (as subsequent monitoring as discussed in the Washoe Cultural Monitoring Plan), community groups are classified as follows (with diversions from the SHG classification system noted):

4.1.1 Mixed Conifer Forest (Mixed Conifer Understory)

SHG's classification of "*Mixed Conifer Forest*" community was divided into two communities: "Mixed Conifer Forest (Mixed Conifer Understory)", and "Mixed Conifer Forest (Dry Meadow Understory)", recognizing areas of mixed conifer forest interspersed with dry meadows that were smaller than the mapping resolution. This was important because dry meadows support culturally significant plant species and the interspersed communities co-occurred regularly. SHG utilized a smaller mapping resolution, which allowed these areas to the mapped separately as two distinct community types. However, for future mapping efforts and projected level of staff availability, this coarser mapping resolution will be utilized for monitoring purposes, following the understory distinction.

Mixed conifer forests are typically rocky areas of glacial outwash or moraine deposits (SHG 2009). The Mixed Conifer Forest (Mixed Conifer Understory) community group is typically found on the Marla loamy coarse sand soil type (NRCS Soil Map Unit 7471), which is poorly drained (hydrologic soil

group A/D, Table 2), although it is found on other soil types (particularly 7451 and 7041) in the meadow in more limited distributions.

The conifer forest cover includes Jeffery pine (*Pinus jeffreyi*), white fir (*Abies concolor*), red fir (*Abies magnifica*), cedar (*Calocedrus decurrens*), lodgepole pine, and sugar pine (*Pinus lambertiana*), although white fir and lodgepole pine are dominant conifers. This community type includes lodgepole pine, but differs from the Lodgepole Pine Forest Community in that the lodgepole are not a single-aged, closely spaced, closed canopy thicket, but are interspersed among other conifer types with a generally open canopy and a diverse herbaceous understory. Conifer cover does not include old growth trees, as past timber harvesting has removed any old growth that may have been present. Downed wood is prevalent. Understory indicator species include blueberry (*Vaccinium occidentale*), serviceberry (*Amelanchier alnifolia*), honeysuckle (*Lonicera conjugialis*), yarrow (*Achillea millefolium*), Western aster (*Symphyotrichum ascendens*), corn lily (*Veratrum californicum*), braken fern, and sedge (*Carex*) species.

4.1.2 Mixed Conifer Forest (Dry Meadow Understory)

The Mixed Conifer Forest (Dry Meadow Understory) community group is almost exclusively found on the Celio loamy coarse sand (7431) and Gefo gravelly loamy coarse sand (7451) soil types, hydrologic soil groups A/D and A, (Table 2), respectively, which are more well-drained soil types that those they typically support the Mixed Conifer Forest (Mixed Conifer Understory) community group. These areas typically have saturated soils during and following snowmelt and runoff, but the upper layer gradually dries out over the course of the summer.

Conifer forest cover similarly includes Jeffery pine, white fire, cedar, lodgepole pine, and sugar pine. White fir, lodgepole pine, and Jeffery pine are the dominant conifers. Similarly, conifer cover does not include any old growth trees. The canopy of this community is more open than the Mixed Conifer Forest (Mixed Conifer Understory) community, with greater cover of litter, thatch, and bare ground. The understory seasonally dry meadow is dominated by graminoids, which are typically upland and facultative wetland species. These graminoids typically include sedges and grasses, and other indicator species include yarrow, cinquefoil (*Potentilla gracilis*), horkellia (*Horkellia fusca*), and tidy lupine (*Lupinus lepidus*).

4.1.3 Lodgepole Pine Forest

SHG's 2005 mapping of the "*Lodgepole Pine Forest*" community was interspersed with patches of wet meadow, often smaller than the 2017 mapping resolution, therefore these area were collectively grouped as the Lodgepole Pine Forest during the 2017 mapping effort. Because of lodgepole's invasive nature in wet meadows, it was important to highlight lodgepole presence in wet meadow areas. SHG followed similar mapping methods, at a finer mapping resolution, reflecting the significance of invading lodgepole on meadow ecology.

Lodgepole pine can tolerate a wide range of soil moisture conditions, including periodic inundation and seasonally wet soils, and do not tolerate shade, which lends to their invasive nature in meadows that have experienced disturbance, management changes, and/or groundwater reductions. The Lodgepole Pine Forest community group is nearly exclusive to the Tahoe complex soil type (7041), which is very poorly drained and has a high water table (hydrologic soil group C/D, Table 2).

Groupings of lodgepole pine are typically single-aged stands of densities difficult for humans to move through. The density of the lodgepole often creates a low, closed canopy. Understory graminoids, shrubs, and forbs are still be present, and can be diverse, although are limited in cover. Understory

indicator species included azalea (*Rhododendron columbianum*), serviceberry, violet (*Viola glabella*), and bracken fern.

Overarching goals of implementation actions in Meeks Meadow are to reduce the Lodgepole Pine Forest community and associated species, and replace with a mosaic of other meadow community types appropriate for the given soil conditions.

4.1.4 Mixed Riparian Scrub

Streamside vegetation is typically dominated by woody riparian vegetation including a wide variety of willow (*Salix*) species. Other culturally valuable species include alder (*Alnus incana*), dogwood (*Cornus sericea*), thimbleberry (*Rubus parviflorus*), and current *(Ribes* species). The Mixed Riparian Scrub community is limited to areas directly adjacent to Meeks Creek and associated stream branches, although a large patch is present near the downstream section of Meeks Creek, where there is often standing water through the summer following wet winters. It is nearly exclusive to the Tahoe complex soil type (7041), which is very poorly drained and has a high water table (hydrologic soil group C/D, Table 2).

Indicator species of the Mixed Riparian Scrub community includes Lemmon's willow (*Salix lemmonii*) and alder, both culturally important species. The understory is dominated by graminoids, including sedge species, small fruited bulrush (*Scirpus microcarpus*), pointed rush (*Juncus oxymeris*), and bent grass (*Agrostis* species).

Overarching goals of implementation actions in Meeks Meadow are to increase the Mixed Riparian Scrub community, which include a number of culturally-significant vegetation species, particularly the width of the community along the streambank and out into the meadow areas.

4.1.5 Wet Meadow

SHG's 2005 mapping of "*Wet Graminoid Meadows*" and "*Obligate Sedge Meadows*" were grouped together as a combined "Wet Meadow" for 2017 mapping, as obligate sedge meadows were often smaller than the mapping resolution, and occurred adjacently. These soils are often permanently saturated at or near the ground surface. It is nearly exclusive to the Tahoe complex soil type (7041), which is very poorly drained and has a high water table (hydrologic soil group C/D, Table 2). Vegetation in the Wet Meadow community is tolerate of flooding and fluvial changes of the meandering stream channel. The Wet Meadow community group is dominated by obligate wetland sedges, grasses, and herbaceous perennial species.

Indicator species of the Wet Meadow community included sedge species, small fruited bulrush, pointed rush, bent grass, meadow grass (*Poa* species), California goldenrod (*Solidago californica*), and hairy arnica (*Arnica mollis*). Overarching goals of implementation actions in Meeks Meadow are to increase the Wet Meadow community, which include a number of culturally-significant species.

4.1.6 Dry Meadow

Exclusive Dry Meadow areas were limited within Meeks Meadow, due to the inclusion of dry meadow patches within mixed conifer forests under the Mixed Conifer Forest (Dry Meadow Understory) community group. The Dry Meadow community is dominated by graminoids which are typically facultative wetland species. These graminoids typically include sedges and grasses, and other culturally valuable species such as yarrow, wild onion (*Allium* species), and wild strawberry (*Fragaria virginiana*) are often present. The Dry Meadow community occurred across various ranges of the soil types within Meeks Meadow, include 7041, 7431, and 7451, all previously discussed (Table 2).

Indicator species of the Dry Meadow community included dry sedge species, slender muhly (*Muhlenbergia filiformis*), wild rye (*Leymus triticoides*), and squirrel tail grass (*Elymus elymoides*). Overarching goals of implementation actions in Meeks Meadow are to increase the Dry Meadow community, which include a number of culturally-significant species, particularly at the transition zone between the Wet Meadow community and the Mixed Conifer Forest communities.

Table 2 - Project Area Soil Map Units and Soil Characteristics

NRCS Soil Map Unit	Map Unit Name	Map Unit Slope	Notes	Drainage	Hydrologic Soil Group
7041	Tahoe complex	0-2%	Water table present	Very poorly drained	C/D
7431	Celio loamy coarse sand	0-5%	Occasional ponding	Somewhat poorly drained	A/D
7451	Gefo gravelly loamy coarse sand	2-9%	Surface runoff very low	Somewhat excessively drained	A
7471	Marla loamy coarse sand	0-5%	Frequent ponding	Poorly drained	A/D
7484	Meeks gravelly loamy coarse sand	5-15%	Surface runoff very low; Extremely bouldery	Somewhat excessively drained	A
7486	Meeks gravely loamy coarse sand	30-70%	Surface runoff low; Extremely bouldery	Somewhat excessively drained	A

4.2 Vegetation Community Mapping

Details of existing vegetation community mapping methods and resolutions are discussed in more depth in the Washoe Cultural Monitoring Plan, as a monitoring technique to address Objective C. Periodic remapping of the existing vegetation communities within the meadow can provide an overall understanding of the effectiveness of management techniques, and the trajectory of the meadow communities away from lodgepole pine domination and towards community groups beneficial for Washoe cultural purposes.

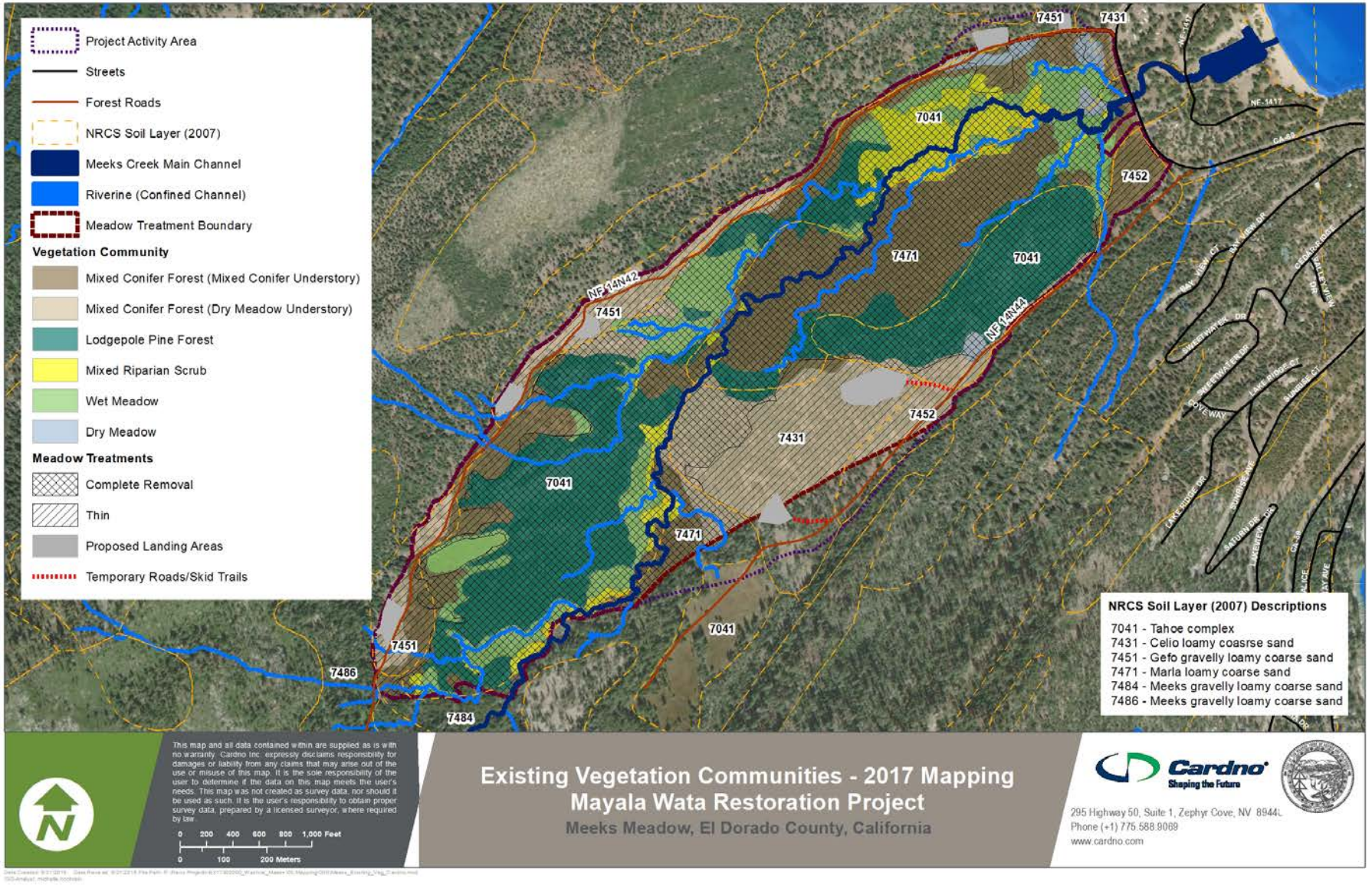

Figure 2 - Existing Vegetation and Soil Types

5 Restoration Management Actions

5.1 Conifer Removal

The project proposes to restore approximately 300 acres of meadow habitat in Meeks Meadow through removal of encroaching conifers and prescribed fire (Figure 3). The preferred approach is to treat the entire meadow in one entry using a combination of mechanical equipment and hand treatment followed by prescribed fire, as groundwater table levels are expected to increase significantly following to removal of conifers from the meadow. If the entire meadow cannot be treated in one year, the treatment will be phased to ensure that conifer removal/thinning and burning occur in the same year in each area, where burn plans allow. Prescribed fire in the form of broadcast burning will be introduced into the treated areas to enhance and encourage native meadow and riparian vegetation. All conifer removal actions outlined for the initial project implementation are permitted under a Timber Waiver, Category 4, for this this project, which includes more detail of conifer removal implementation actions.

Due to the severity of conifer encroachment along the meadows edge and within the majority of the meadow, the preferred method of treatment would be to utilize mechanical equipment where conditions allow. In order to eliminate the need for burn piles as well as excessive slash depths, Mechanical equipment would be used to remove material from the project area, which eliminates the need for burn piles. The soil and water quality impacts of using low ground pressure mechanical equipment treatments in stream environmental zones (SEZs) under appropriate soil moisture conditions have been shown to be minimal (Norman et.al 2008; Cody and Norman, 2011).

Mechanical suitability will be determined based on the Lake Tahoe Basin Management Unit SEZ Sensitivity Rating System, which considers a treatment unit's proximity to stream channels or other water features, also depends on soil moisture conditions at the time of treatments. The completed SEZ ratings for this project indicate that the project treatments are in locations determined to be operable based only on the physical site characteristics. However, the soil moisture conditions prior to on the ground operations may dictate otherwise. Several areas of depressions in the meadow identified during the ratings suggested that some portions of the project area will remain too wet to treat mechanically, particularly in wet years.

Treatment type will be determined by soil type, and existing conifer stand conditions. Conifers less than 30 inch Diameter at Breast Height (DBH) will be removed within the meadow and along the meadows edge. Additionally, a buffer along the meadows edge will have all conifers removed to reduce future seed sources. Existing snags within the meadow, along the meadows edge, as well as within the thinned areas will not be removed unless deemed necessary to complete treatment activities. Within thinning treatments, conifers less than 30 inch DBH will be thinned from below to mimic historic stocking levels.

Landings are defined as that area where forest products are concentrated prior to additional processing or removal from the project area. Existing openings or disturbed areas will be used for landing locations, where available. Where previous disturbance or openings are not available, new landings will be constructed (Figure 3). Landings will be no larger than two acres in order to safely facilitate the handling and removal of material (e.g. logs, biomass). Constructed landings may require removal of trees larger than 30-inch DBH, but removal will be minimized with choice location of landings. Landings pose potential short term visual impacts; however, landings will be

rehabilitated post implementation. Rehabilitation will include spreading chip, subsoiling to a minimum depth of 12 inches, reseeding with native species, and spreading meadow mowing clippings as ground cover.

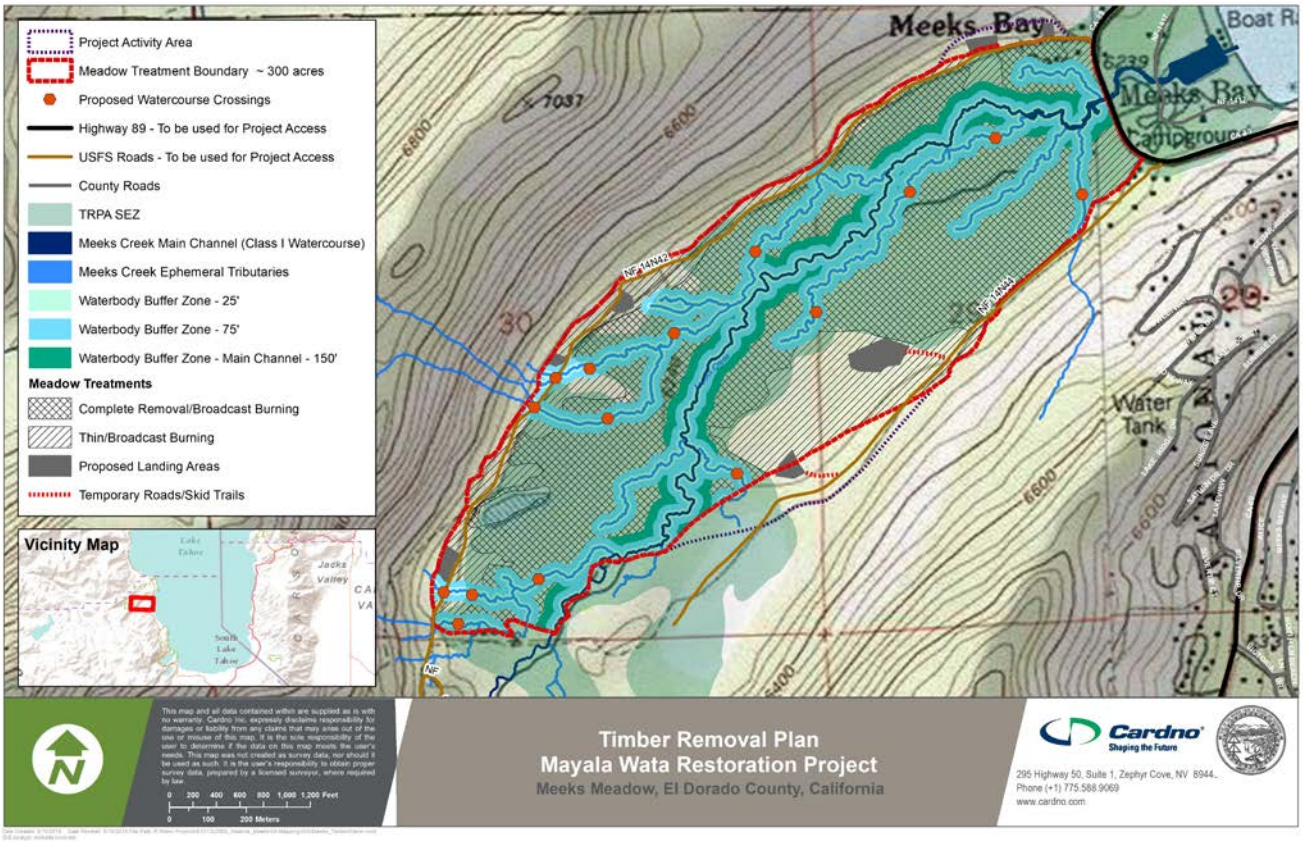

Figure 3 - Updated Timber Removal Plan

5.1.1 Mechanical Treatments

In all areas considered operable, limit mechanical equipment operations to innovative technology that has been demonstrated to adequately protect soil and water resources. Examples include but are not limited to: cut-to-length harvester and forwarding (CTL) operations, low ground pressure tracked equipment; rubber-tired equipment; equipment that operates on a bed of slash; over-snow equipment. The LTBMU SEZ rating system or other current research is applied to each treatment unit. This rating is used to determine to what extent mechanized equipment is used, and the level of monitoring needed both during and post-treatment. Where it is available, mechanized equipment would operate over a slash mat to reduce soils impacts, with this material left on site to add to the fuel bed for prescribed burning. Mechanical removal treatments will be constrained to an upper diameter limit of 30 inches DBH.

5.1.2 Hand Treatments

Hand treatments will remove trees up to 30 inches DBH. Manageably-sized portions of felled live trees (e.g., branch wood and portions of boles smaller than 16 inches in diameter) will be lop and scattered to provide a fuel bed for prescribed broadcast burning. Larger material will be left in place only if it is out of reach of the mechanical equipment. Hand treatment will be used if no other mechanical removal options exist in the project area.

5.1.3 Related Permit Conditions

Refer to the Timber Waiver Permit, Category 4, for further details related to conifer removal. Refer to the 2019 Máyala Wata Restoration Project at Meeks Meadow Initial Study (CEQA document) and 2013 Decision Memo for the Implementation of the Meeks Creek Ecosystem Restoration Project (NEPA document) for related project Resource Protection Measures (RPMs).

5.2 Prescribed Burning

Prescribed fire in the form of broadcast burning will be used as a treatment to remove small conifers (<3 inches DBH) and enhance native riparian plant vigor and diversity. Broad cast burning will be used subsequent to thinning treatments, preferably immediately following vegetation treatments. The water table is expected to rise significantly after conifers are removed, therefore broadcast burning should be conducted within the same field season as conifer removal. Anticipated fire intensity would be light to moderate and residence time would be limited. Burning prescriptions will be designed to avoid adverse effects on soil and water resources by planning prescribed fire to ensure that fire intensity and duration do not result in severely burned soils. Additionally, fires would not be ignited in stream corridors to avoid water quality impacts.

5.2.1 Related Permit Conditions

Refer to the Timber Waiver Permit, Category 4, for further details related to prescribed burning. Refer to the 2019 Máyala Wata Restoration Project at Meeks Meadow Initial Study (CEQA document) and 2013 Decision Memo for the Implementation of the Meeks Creek Ecosystem Restoration Project (NEPA document) for related project Resource Protection Measures (RPMs). Burn plans and permits related to broadcast burning will need to be coordinated with LTBMU during the year for which the burns will take place. Refer to Section 4.17.11 of the 2019 Initial Study for more details related to burn plans and permits.

5.3 Cultural and Adaptive Vegetation Management

The goals and objectives of this plan complement the purpose and need for the project, as discussed in the 2013 Decision Memo for the project. However, the goals (described in more detail in Section 3) incorporate cultural management practices as a means of complementing or substituting western restoration practices, while reaching the same desired outcome.

Cultural management of native landscapes includes a variety of methods and techniques, timing, and use of tools for manipulating the landscape. Cultural management of aboriginal lands by the Washoe people have influenced the size, structure, and species composition of aboriginal lands for thousands of years prior to Euro-American arrival, including Meeks Meadow. Cultural management involves working in harmony with the existing landscapes, and seasonal shifts, and the use of harvesting and management techniques that ensure the continuation of the target species (Anderson 2005). Cultural management techniques to be employed in Meeks Meadow are discussed below, although the execution of various techniques will be dependent on outcomes of the timber removal and prescribed fire actions, as well as ongoing monitoring of the meadow.

This cultural management plan aligns with the Purpose and Need statement of the Decision Memo for implementation the Project (Forest Service 2013), while adding a vital cultural component. Maintaining and enhancing the Washoe Tribal legacy at Lake Tahoe is an important step in collectively planning for future environmental and climate change resiliency. The Tribe has thousands of years of history and effective stewardship experience of resource allocation and environmental management within the Lake Tahoe basin. The planning and future restoration efforts will allow for the expansion and

improvement of quality natural areas on aboriginal lands, allowing Tribal Elders to share TEK of cultural plants and environmental practices with the youth and other Tribal members. The implementation of this project and subsequent cultural management will demonstrate the efficacy of TEK in the restoration and management of ecosystems and continue to build Tribal participation in this management.

The primary goal of the Project is to restore the meadow from conifer encroachment. The objectives of the Project are to establish long term management of the Meeks Meadow by the Washoe Tribe and to implement an active vegetation management and maintenance plan that is based on TEK; and finally, it is the Tribe and Forest Service objective to implement the Project while creating no significant adverse impact on the environment. Long-term cultural management and use of TEK at Meeks Meadow will include the following cultural management methods.

5.3.1 Cultural (Broadcast) Burning

The practice of cultural burning is similar in purpose and outcome of prescribed broadcast burning. Cultural burning has been practiced in the Lake Tahoe basin by Washoe people for thousands of years prior to Euro-American arrival, and is a means of maintaining the open character of meadows and controlling meadow invasion by conifers. Cultural broadcast burning promotes new growth of basket making materials, limits growth of brush and conifer invasion, maintains the open characteristic of meadows, implements fuels management, triggers seedbank growth, and improves soil nutrients and fertility. Cultural burning is historically conducted in the late fall, prior to snowfall, to achieve maximum benefits to woody riparian species and prevent unnecessary vegetative harm.

Broadcast burning can increase the abundance and density of tubers, rhizomes, and mushrooms, promote vigorous growth of basket making materials, remove or reduce annual and perennial deceased vegetation matter, promote recycling of nutrients, and decrease plant completion. The history of deliberately burning meadow and forest favored specific plants (such as bracken fern) and promoted the open character of Meeks Meadow that aided with the hunting of animals.

Subsequent cultural burning activities (following initial project implementation) would be required to enroll under a separate Timber Waiver: Category 2. Such subsequent and monitoring-driving cultural broadcast burning actions would likely be limited to specific area of concern, rather than the entire meadow. Burn plans and permits related to broadcast burning will need to be coordinated with LTBMU during the year for which the burns will take place.

5.3.2 Collection and Trimming

Collection, trimming, or pruning management techniques can be used for various purposes, such as the removal of materials for basket making, trimming of older/decedent vegetation to ensure new growth and shoots, collection of foods or medicines for consumption, or weeding around desirable plants to decrease competition. Removal of deceased portions of perennial plants can improve overall plant health and promote vigorous new growth (such as the removal of dead elderberry stems within a shrub). Plants utilized for basket making material are often trimmed during the winter or spring to assure there will be new shoots to harvest the following year. Trimming can also activate underground root structures to encourage new outshoots of growth.

Seasonality of willow collection depends on purpose, but primarily when the plants are mostly dormant for both basket making and for propagation purposes. Cutting, pruning, or harvesting at this time is less harmful to the overall health of the plant.

Collection and trimming generally includes the removal of some plant part, whether it is taken off-site for Tribal consumption or use, or left on-site to decompose and return nutrients to the soil. Care is taken to avoid overharvesting, and collection areas will be rotated as appropriate. Collection and trimming tools include human hands and hand-held tools.

5.3.3 Planting

Cultural planting at Meeks Meadow would be limited to native, culturally-significant plants, as listed in Appendix X, and include planting of containerized stock, transplanting, and woody cuttings installation. Plantings can increase desirable plant densities and frequencies, increase genetic diversity, and create resilience to environmental changes such as climate change. Cultural planting may include the planting of containerized stock, as obtained by commercial native plant nurseries, or as propagated by the Tribe or other partners using native, local genetic material (seeds or woody cuttings). Plantings could also include wattle installation or pole planting of native, local woody vegetation cuttings. Plantings may also be considered the transplantation of native, local plant material, as taken from areas within the meadow, or other appropriate and landowner approved locations within or near the Lake Tahoe basin that can support minimal removal of the given species. Planting locations would be selected based on appropriate vegetation community, plant needs, and existing plant diversity. Planting techniques would typically include hand tools such as shovels and trowels, but may include gas-powered soil augers (for creating planting holes) or waterjet stingers (for creating holes for pole planting).

5.3.4 Seeding

Seed material used at Meeks Meadow would also be limited to native, culturally-significant plants, as listed in Appendix X. Seeding can be used to propagate desirable vegetation, particularly in areas that have been weeded, have limited vegetation growth, or immediately following prescribed or cultural burning. Seeding as a management technique to influence community composition can be particularly helpful in recently burned areas, areas that have been weeded, areas of limited vegetation growth, or areas at risk of invasive species. Utilized seed may be from commercial stock (certified weed-free) or from Tribal or other partner's collations from within the meadow, or other appropriate and landowner-approved locations within or near the Lake Tahoe Basin. Seed collections would be limited to the collection of seed exclusively (without the removal of all seed on a single plant), rather than removal of seed heads or entire plant, to ensure both annual and perennial plants continue to survive and re-propagate in place. Seeding may be conducted by hand or with broadcast backpack seeders.

5.3.5 Tilling and Digging

The purpose of tilling and digging is to aerate soils, improve water percolation, decrease soil compaction, and incorporate organic materials and nutrients into the soil profile. This can improve the soil conditions and below- and above-ground health of certain plants and promote tuber and rhizome propagation (Anderson 2005). Tilling and digging are conducted with hand tools and are typically conducted at small spatial scales within larger landscapes.

5.3.6 Beaver

Beaver presence has been noted at Meeks Meadow over the past several decades. There is a long history of disagreement of whether beaver are native to the watershed. The Washoe Tribe has a name for beaver, 'cimélhel'. The name is documented in multiple stories, as well as in elicitations captured by linguists. As beaver can improve the stream hydrology and wetland characters of the meadow, there is no specific objection to beaver occupation of the meadow, however, specific cultural

management for beavers is not a historic or traditional practice of the Washoe, therefore will not be included as a cultural management technique in this plan.

5.3.7 Adaptive Management Triggers

Continued cultural management actions will be triggered based on outcomes of the Washoe cultural monitoring plan for this project. Should density, cover, or community size decrease or increase beyond the target levels outlined in the management plans, the Washoe Tribe, in collaboration with LTBMU, will initiate any of the above cultural management measures.

5.3.8 Related Permit Conditions

Subsequent cultural and adaptive management measures (following initial project implementation), will require additional permitting, including a separate Timber Waiver. Under the 2014 Timber Waiver guidance, this type of action would fall under Category 2. Refer to the 2019 Máyala Wata Restoration Project at Meeks Meadow Initial Study (CEQA document) and 2013 Decision Memo for the Implementation of the Meeks Creek Ecosystem Restoration Project (NEPA document) for related project Resource Protection Measures (RPMs). Burn plans and permits related to broadcast burning will need to be coordinated with LTBMU during the year for which the burns will take place. Refer to Section 4.17.11 of the 2019 Initial Study for more details related to burn plans and permits.

5.4 Non-Native and Invasive Species Management

The actions of non-native and invasive species management are similar to those of collection and trimming, however, includes the entire removal of the target plant either by digging, cutting, or pulling. If the removed plant part has viable seeds, the entire plant will be removed from the site. Tools for non-native and invasive species management include human hands and hand-held tools. Target species to monitoring and manage for include species on the most recent list of LTBMU Invasive Plants of Management Concern, and additionally any lodgepole pine seedlings within the meadow and riparian communities.

Should the LTBMU determine that herbicides are necessary for the control of an invasive species in the meadow, consultation and transparency with the Tribe is required to determine if the location or timing of application would put Tribal members utilizing the meadow or meadow resources for exposure.

6 Capacity Building Management Actions

6.1 Education and Outreach

Incorporating education and outreach for both Tribal and non-Tribal members is a key component of this project. Education and outreach can reinforce the Washoe's connection to Meeks Meadow, Lake Tahoe, cultural practices, and can also improve collaboration with non-Tribal entities and the general public.

Tribal outreach and education can be conducted through scheduled meadow or project specific events specific to Washoe Tribal members, such as guided management workshops, crew workdays, youth educational events, vegetation monitor training, and elder luncheons. Existing annual/semi-annual Tribal events can be capitalized on to include components and education specific to Meeks Meadow, such as Wa-She-Shu-It'-Deh Festival, WEPD Earth Day, the Washoe Picnic, and Meeks Bay Beautification Day. Other, non-Tribally specific, events can also be utilized for Meeks Meadow educational and outreach purposes, such as the Tahoe Summit, South Lake Tahoe Earth Day, Reno Earth Day, and Bi-State TEK Summits. Presentation of outcomes of the Máyala Wata Restoration Project and on-going management and adaptive efforts can be conducted at Tribally-attended conferences and meetings, such as the Tribal EPA Region 9 Conference, Regional Tribal Operations Committee meetings, or other such WEPD attended events. Electronic files may be uploaded to the Washoe Tribal website for viewing by Tribal members and the general public.

Internal Tribal outreach will consist of regular updates through Washoe Tribal networks, including articles in the Washoe Tribal Newsletter (quarterly publication), regular meetings with the Washoe Cultural Resource Advisory Council (WCRAC) for updates and input, and presentations at Community Council and Tribal Council meetings.

Educational and outreach materials will differ depending on the audience. WEPD is in the process of developing a baseline set of educational materials, including poster board presentations, informative flyers, a picture book (or electronic file) of culturally-significant vegetation with plant descriptions for easier identification.

Educational events may also include continuing education and trainings for WEPD, necessary for the ongoing successful management and monitoring of the meadow. These events may include plant identification trainings, field methods courses, GPS/GIS trainings, and other related classes, workshops, and trainings. Continuing education and training of new WEPD staff is vital to the continuation of successful adaptive management of Meeks Meadow.

Education and outreach will continue to evolve following project implementation, and events and educational activities are likely to differ year to year, based on WEPD staffing, funding, event timing, and interest. Continued education and outreach during the implementation and continued maintenance and adaptive management will allow the Máyala Wata Restoration Project to continue to reinforce Washoe connection, management, and stewardship of aboriginal lands.

6.2 Collaboration Opportunities

Opportunities for collaboration with partners will continue past the implementation stage and through the foreseeable future of monitoring and cultural and adaptive management at Meeks Meadow. Successful collaboration with LTBMU on the implementation and continued management of the meadow may provide a template for additional joint restoration projects in the Tahoe Basin and elsewhere. Other collaborations may focus on educational components, continuing scientific and/or

TEK research related to the meadow, or providing funding and support. Successful collaboration will help to demonstrate the efficacy of TEK and tribal land management, particularly on public federal lands that are not explicitly held in trust for a tribe. Collaboration on specific goals, such as regularly scheduled monitoring of the Meadow, will help continue to foster communication between the Tribe and LTBMU. The exchange of ideas on a staff-to-staff level will help both groups keep in mind compatible goals, all while striving to improve stewardship and consultation at Lake Tahoe. All monitoring data will be shared with LTBMU following each scheduled monitoring event.

WEPD will provide background information to Tribal leadership to make informed decisions regarding the continued renewal of the MOU/Cooperative Agreements as needed. WEPD will assist in the process if requested to do so by the Washoe Tribal Council.

6.3 Future Funding Opportunities

The success of continued cultural management and monitoring of Meeks Meadow is dependent on future funding sources. WEPD, with the support of the Washoe Tribal Council, will continue to seek ongoing funding for post-project cultural monitoring, cultural management, and ongoing adaptive management as necessary. Additionally, WEPD and other Washoe Tribal programs will seek funding for educational activities and support, as needed, based on baseline funds available and planned programming. As the Washoe Tribe receives minimal internal revenue, it will be imperative for outside sources and collaborators to contribute to the ongoing success as a project post-implementation.

6.4 Monitoring

Monitoring is an effective means of determining status of successful implementation and next steps of cultural/adaptive management. Just as the Washoe implemented continued management of Meeks Meadow in the past, health of the meadow involves not just one entry of conifer removal and prescribed fire, but ongoing management of the meadow using low-intensity management measures such as broadcast burning (prior to subsequent invasion of lodgepole pine) in order to suppress lodgepole seedings /saplings before becoming large trees. Such ongoing management will be based on the outcomes of monitoring. Specifics of monitoring details and protocols are outlined in the Washoe Cultural Monitoring Plan.

As mentioned above, WEPD will continue to seek ongoing funding for post-project cultural monitoring, as needed, based on initial funding available for monitoring and monitoring schedule.

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Appendix A – Culturally-significant Plant Species

Achillea millefolium	Yarrow
Aconitum columbianum	Monkshood
Adenocaulon bicolor	Trail plant
Allium campanulatum	Sierra onion
Allium validum	Pacific/swamp onion
Alnus spp.	Mountain alder
Amelanchier spp.	Serviceberry
Antennaria umbrinella	Rosy pussytoes
Aquilegia formosa	Western columbine
Arctostaphylos patula	Greenleaf manzanita
Balsamorhiza sagittata	Arrowleaf balsamroot
Calocedrus decurrens	Incense cedar
Calochortus spp.	Mariposa lily
Carex nebrascensis	Nebraska sedge
Carex rostrata	Beaked sedge
Castilleja mutis	Indian paintbrush
Cirsium andersonii	Anderson's thistle
Cornus sericea	Redosier dogwood
Epilobium angustifolium	Fireweed
Equisetum arvense	Field horsetail
Fragaria virginiana	Mountain strawberry
Gentiana calycosa	Raineer pleated gentian
Heracleum lanatum	Cows parsnip
Hieracium albiflorum	Whitehawk weed
Ipomopsis aggregata	Scarlet gilia
Iris spp.	Iris
Lilium parvum	Sierra tiger lily
Lupinus brewerii	Brewers lupine
Lupinus lepidus	Pacific lupine
Lupinus polyphyllus	Big leaf lupine
Madia spp.	Tarweed
Mentha arvensis	Field Mint
Penstemon newberryi	Mountainpride penstemon
Penstemon rydbergii	Rydberg's penstemon
Perideridia spp.	Yampa
Pinus lambertiana	Sugar pine

Platanthera leucostachys	Orchid white flowered bog
Polygonum polygaloides	Milkwort Knotweed
Prunus emarginata	Bitter cherry
Prunus virginiana	Choke cherry
Pteridium aqualinum	Bracken Fern
Pterospora andromedea	Woodland pinedrops
Quercus kelloggii	California black oak
Quercus vaccinifolia	Huckleberry oak
Ranunculus alismifoliu	Alisma-leaved buttercup
Ribes cereum	Wax currant
Ribes nevadensis	Sierra currant
Ribes roezlii	Sierra gooseberry
Rosa woodsia	Rose
Rubus parviflorus	Thimbleberry
Salix eastwoodiae	Mountain Willow
Salix lemmonii	Lemmon's Willow
Salix lucida ssp. lasiandra	Shining Willow
Salix scouleriana	Scouler's willow
Sambucus spp.	Elderberry
Sarcodes sanguinea	Snow flower/plant
Senecio triangularis	Arrow leaf groundsel
Sidalcea glaucescens	Waxy checkermallow
Stellaria longipes	Meadow starwart
Symphyotrichum ascendens	Western aster
Thalictrum fendleri	Fendlers meadowrue
Tragopogon dubius	Yellow salsify
Trifolium longipes	Longstock clover
Veratrum californicum	California corn lily
Viola glabella	Pioneer violet

Appendix B – LTBMU Invasive Species List

DiUSDA FOREST SERVICE
LAKE TAHOE BASIN MANAGEMENT UNIT

INVASIVE PLANTS OF MANAGEMENT CONCERN

Scientific Name	Common Name	LTBMU Priority	NDA	CDFA	Cal-IPC	LTB WCG	Known in project
Acroptilon repens	Russian knapweed	Medium	B	B	Moderate	Group 1	
Ailanthus altissima	tree of heaven	High		C	Moderate	Group 1	
Bromus tectorum	cheat grass	Low			High		
Carduus nutans	musk thistle	High	B	A	Moderate	Group 1	
Centaurea calcitrapa	purple starthistle; red starthistle	Medium	A	B	Moderate	Group 1	
Centaurea diffusa	diffuse knapweed	High	B	A	Moderate	Group 1	
Centaurea maculosa	spotted knapweed	High	A	A	High	Group 2	
Centaurea solstitialis	yellow starthistle	Medium	A	C	High	Group 1	
Centaurea virgata ssp. *squarrosa*	squarrose knapweed	High	A	A	Moderate		
Chondrilla juncea	rush skeletonweed	High	A	A	Moderate	Group 1	
Cirsium arvense	Canada thistle	High	C	B	Moderate	Group 1	
Cirsium vulgare	bull thistle	Low		C	Moderate	Group 2	
Conium maculatum	poison hemlock	Low	C		Moderate		
Cytisus scoparius	Scotch broom	Medium		C	High	Group 2	
Dipsacus fullonum	teasel; Fuller's teasel	Low			Moderate	Group 1	
Dittrichia graveolens	stinkwort	Low			Moderate	Group 1	
Elymus caput-medusae	medusahead	High	B	C	High	Group 1	
Elymus repens	quackgrass	Low		B			
Hydrilla verticillata	hydrilla; waterthyme	N/A	A	A	High; Alert		
Hypericum perforatum	St. Johnswort; Klamathweed	Medium	A	C	Moderate	Group 2	
Isatis tinctoria	Dyer's woad	High	A	B	Moderate	Group 1	
Lepidium appelianum	globe-podded hoary cress; hairy whitetop	Medium		B	Limited	Group 1	
Lepidium draba	heart-podded hoary cress; whitetop	Medium	C	B	Moderate	Group 1	
Lepidium latifolium	tall whitetop; perennial pepperweed	High	C	B	High	Group 2	
Leucanthemum vulgare	oxeye daisy	Low			Moderate	Group 2	
Linaria genistifolia spp. *dalmatica*	Dalmatian toadflax	High	A	A	Moderate	Group 2	
Linaria vulgaris	yellow toadflax; butter & eggs	High	A		Moderate	Group 2	
Lythrum salicaria	purple loosestrife	High	A	B	High	Group 1	
Myriophyllum spicatum	Eurasian watermilfoil	N/A	A		High		
Onorpordum acanthium ssp. *acanthium*	Scotch thistle	High	B	A	High	Group 1	
Potamogeton crispus	curlyleaf pondweed	N/A			Moderate		
Potentilla recta	sulfur cinquefoil	Medium	A	A		Group 1	
Rubus armeniacus	Himalaya blackberry	Medium			High		
Tamarix chinensis, T. ramosissima, & T. parvifolia	tamarisk; saltcedar	High	C	B	High	Group 1	

Revised 06/24/15

LTBMU: High—Species that have a large ecological impact or invasive potential; species that are easily controlled. Medium—Species that have a moderate ecological impact or invasive potential; species that may be difficult to control. Low—Species that have a low ecological impact or invasive potential; species that require substantial effort to control. N/A—species not evaluated.
NDA: Nevada Department of Agriculture Noxious Weed List (http://agri.nv.gov/nwac/PLANT_NoxWeedList.htm) Category A—Weeds not found or limited in distribution throughout the state; actively excluded from the state and actively eradicated wherever found; actively eradicated from nursery stock dealer premises; control required by the state in all infestations. Category B—Weeds established in scattered populations in some counties of the state; actively excluded where possible, actively eradicated from nursery stock dealer premises; control required by the state in areas where populations are not well established or previously unknown to occur. Category C—Weeds currently established and generally widespread in many counties of the state; actively eradicated from nursery stock dealer premises; abatement at the discretion of the state quarantine officer.
CDFA: California Department of Food and Agriculture Noxious Weed List (http://www.cdfa.ca.gov/phpps/ipc/). A--Eradication or containment is required at the state or county level. B—Eradication or containment is at the discretion of the County Agricultural Commissioner. C--Require eradication or containment only when found in a nursery or at the discretion of the County Agricultural Commissioner. Q—Require temporary "A" action pending determination of a permanent rating.
Cal-IPC: California Invasive Plant Council Online Invasive Plant Inventory (2006) (http://www.cal-ipc.org/ip/inventory/weedlist.php). High—Species having severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Moderate—Species having substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Limited—Species that are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Alert—Species with significant potential for invading new ecosystems.
LTBWCG: Lake Tahoe Basin Weed Coordinating Group Weed Priority List (2010). Group 1--Watch for, report, and eradicate immediately. Group 2--Manage infestations with the goal of eradication.

Mayala Wata Restoration Project at
Meeks Meadow
Initial Study/Negative Declaration

APPENDIX

B

TRPA EIP PERMIT

TAHOE REGIONAL PLANNING AGENCY

Mail
PO Box 5310
Stateline, NV 89449-5310

Location
128 Market Street
Stateline, NV 89449

Contact
Phone: 775-588-4547
Fax: 775-588-4527
www.trpa.org

LAKE TAHOE EIP
CONSERVATION. CLEARLY.

December 4, 2018

Jeff Marsolais
USFS LTBMU
35 College Drive
South Lake Tahoe, CA 96150

Dear Jeff,

Thank you for providing TRPA with the Environmental Assessment including the Decision Notice and Finding of No Significant Impact for the Mayala Wata Restoration Project at Meeks Meadow. This letter is intended to satisfy your request concerning consistency of the project with the USFS/TRPA Memorandum of Understanding and the TRPA Environmental Threshold Carrying Capacities.

Pre-European conditions for the Meeks Meadow are considered to be those prior to Comstock logging, livestock grazing, mining, and fire suppression. Restoring this meadow to these conditions, followed by the management processes described in the Decision Memo, will improve meadow function, increase resilience to fire and climate change, and improve habitat and forest health.

TRPA staff, working with USFS LTBMU staff, and staff from Cardno representing the Washoe tribe of California and Nevada, has confirmed that the review of the Mayala Wata Restoration Project at Meeks Meadow is complete. The design features and BMPs, as described in the Project Decision Memo, have resulted in a determination that this project is consistent with the TRPA/USFS MOU and the TRPA Environmental Threshold Carrying Capacities. TRPA, LTBMU and Cardno staff have completed TRPA V(g) findings and the Initial Environmental Checklist and identified no TRPA threshold impacts.

TRPA supports the project and appreciates the opportunity to work with the LTBMU in improving the forest stand conditions in the Basin. The project is consistent with the vegetation management goals of restoring forest health and reducing hazardous fuel conditions. Please feel free to contact me should you have any questions concerning this letter.

Sincerely,

Joanne S. Marchetta
Executive Director
TRPA

MITIGATED FINDING OF NO SIGNIFICANT EFFECT

PROJECT DESCRIPTION: Mayala Wata Restoration Project at Meeks Meadow

TRPA PROJECT NUMBER: 01.02.02.2018 FILE #: NA

PEMITTEE(S): USFS LTBMU/Washoe Tribe of Nevada and California

COUNTY/LOCATION: The Meeks Creek Meadow is located within the Meeks Management Area on the western shore of Lake Tahoe in El Dorado County, California in Section 29, SE ¼ Section 30 and the NW ¼ Section 31, T14N,R17E of the Homewood, California quadrangle map.

Staff Analysis: In accordance with Article IV of the Tahoe Regional Planning Compact, as amended, and Section 4.4 of the TRPA Rules and Regulations of Practice and Procedure, the TRPA staff has reviewed the information submitted with the subject project. On the basis of this initial environmental evaluation, Agency staff has found that the subject project will not have a significant effect on the environment.

Determination: Based on the above-stated finding, the subject project is conditionally exempt from the requirement to prepare an Environmental Impact Statement. The conditions of this exemption are the conditions of permit approval.

TRPA Chairman or Executive Director

12·7·18
Date

Regional Plan Compliance: The proposed project complies with all requirements of the TRPA Goals and Policies, Plan Area Statements, including all required findings in Chapter 4 of the TRPA Code of Ordinances.

4.4 Threshold-Related Findings: The following specific findings shall be made, pursuant to Articles V(c), V(g) and VI(b) of the Compact in addition to any other findings required by law.

4.4.A Findings Necessary To Approve Any Project: To approve any project ,TRPA must find, in accordance with Sections 4.2 and 4.3, that:

(1) The project is consistent with, and will not adversely affect implementation of the Regional Plan, including all applicable Goals and Policies, plan area statements and maps, the Code and other TRPA plans and programs.

Rationale: **The Mayala Wata Restoration Project at Meeks Meadow will not adversely affect implementation of the Regional Plan. The proposed project is a meadow restoration / fuels reduction project. After analysis through the TRPA Initial Environmental Checklist (IEC) and V(g) Findings, the design features and BMPs associated with the project will assure any impacts to be less than significant and the project has been deemed consistent with the TRPA Regional Plan, Goals and Policies and environmental thresholds carrying capacities.**

(2) The project will not cause the environmental threshold carrying capacities (thresholds) to be exceeded; and

Rationale: **The proposed meadow restoration/ fuel reduction project will not cause any threshold carrying capacities to be exceeded. In fact, the end result of this project will aid in the attainment of vegetation thresholds by improving forest health, meadow hydrological function and resilience to, wildfire, and climate change. After analysis through the TRPA IEC and V(g) Findings, the design features and BMPs associated with the project will assure any impacts to be less than significant and the project has been deemed consistent with the TRPA environmental thresholds carrying capacities.**

(3) Wherever federal, state or local air and water quality standards applicable for the region, whichever are strictest, must be attained and maintained pursuant to Article V(d) of the Tahoe Regional Planning Compact, the project meets or exceeds such standards.

Rationale: **TRPA has compared all federal, state and local air and water quality standards applicable to the region and after the TRPA IEC and V(g) Findings analysis has concluded that the design features and BMPs proposed in the Mayala Wata Restoration at Meeks Meadow Project assure compliance with all federal, state and local air and water quality standards as well as TRPA Regional Plan standards. This project is also covered under and in compliance with the Lahontan Water Quality Control Board Timber Waiver.**

From:	Bruce Barr
To:	Melanie Greene
Cc:	Shannon Friedman
Subject:	SEZ
Date:	Monday, December 10, 2018 1:33:32 PM
Attachments:	image001.png Landing Map.pdf

Hello Melanie,

TRPA staff has made site visits and made the following determination : TRPA approves the changes to the SEZ boundary as depicted on Figure 1 of Attachment D and concurs that the proposed landing locations are outside of an SEZ. This approval is for the purposes of this project only and future projects may require a site specific SEZ delineation. Please see attached Map.

Sincerely,

Bruce Barr
Tahoe Regional Planning Agency – Forester
bbarr@trpa.org
775 589-5294
CA RPF # 2954, ISA # WE-10271AU

PROJECT REVIEW CONFORMANCE CHECKLIST & V (g) FINDINGS

(Commercial/Tourist Accommodation/Public Service/Recreation/Resource Mngt.)

Project Name: Mahala Wata Restoration Project at Meeks Meadow

Project Type: Meadow Restoration/Fuels Reduction

APN / Project Number: 016-041-06,016-071-12,014-031-04,014-031-09,014-031-10,014-013-15/01.02.02.2018

Project Review Planner: Bruce Barr Date of Review: 10/31/2018

NOTE: if the answer to question b. on any of the following questions is *no*, please provide a written justification on a separate sheet for making the findings required in subsections 4.4.1 and 4.4.2 of the code. If the answer to question b. is yes or if no answer is required, this checklist shall serve as justifications for making said findings. Any positive impacts of the project on the thresholds that have not been addressed in these questions should also be noted.

CATEGORY: AIR QUALITY

THRESHOLD: CARBON MONOXIDE (CO) INDICATOR: (CO) 8-hr. avg. Stateline CA station

1.	a.	Does the project generate new vehicle trips?	Y ☐ N ☒
	b.	If yes, is the project consistent with Subsection 65.2.4.B.1?	Y ☐ N ☐
2.	a.	Does the project create new points of vehicular access?	Y ☐ N ☒
	b.	If yes, is the project consistent with Subsection 34.3.2?	Y ☐ N ☐
3.	a.	Does the project include combustion appliances?	Y ☐ N ☒
	b.	If yes, is the project consistent with Subsection 65.1.4?	Y ☐ N ☐
4.	a.	Does the project include a new stationary source of CO?	Y ☐ N ☒
	b.	If yes, is the project consistent with Subsection 65.1.6?	Y ☐ N ☐

THRESHOLD: OZONE INDICATOR: Ozone, 1-hr. avg. Lk. Tahoe Blvd station

1.	a.	Does the project increase regional VMT?	Y ☐ N ☒
	b.	If yes, is the project consistent with Subsection 65.2.4?	Y ☐ N ☐
2.	a.	Does the project include new gas/oil space/water heaters?	Y ☐ N ☒
	b.	If yes, is the project consistent with Subsection 65.1.4?	Y ☐ N ☐
3.	a.	Does the project include a new stationary source of NO^2?	Y ☐ N ☒
	b.	If yes, is the project consistent with Subsection 65.1.6?	Y ☐ N ☐

THRESHOLD: PARTICULATE MATTER INDICATOR: Part. Matter, 24-hr. avg. Lk. Tahoe Blvd station

1.	a.	Does the project increase airborne dust emissions?	Y ☐ N ☒
	b.	If yes, is the project consistent with Subsection 60.4.3?	Y ☐ N ☐
2.	a.	Does the project include a new stationary source of particulate matter?	Y ☐ N ☒
	b.	If yes, is the project consistent with Subsection 65.1.6?	Y ☐ N ☐

3. a. Refer to question 1, Ozone, above.

THRESHOLD: VISIBILITY — INDICATOR: miles of visibility, veg and subregional path

1. a. Refer to questions 1-3, Particulate Matter, above.

THRESHOLD: TRAFFIC VOLUME — INDICATOR: traffic volume, US 50 at Park Ave.
US 50 CORRIDOR, WINTER, 4pm-12am — Jan.-Mar. avg., 4pm-12am

1. a. Refer to question 1, CO, above.

THRESHOLD: NO^2 EMISSIONS — INDICATOR: VMT

1. a. Refer to questions 1-2, VMT, below.

THRESHOLD: WOOD SMOKE — INDICATOR: number of wood heaters

1. a. Does the project include any new wood heaters? Y ☐ N ☒
   b. If yes, is the project consistent with Subsection 65.1.4.B? Y ☐ N ☐

THRESHOLD: VMT — INDICATOR: changes in number of trips and avg. trip length

1. a. Does the project increase average trip length? Y ☐ N ☐
   b. If yes, is the project consistent with Subsection 65.2.4.B? Y ☐ N ☐

2. a. refer to question 1, CO, above.

CATEGORY: WATER QUALITY

THRESHOLD: TURBIDITY — INDICATOR: turbidity of indicator stations

1. a. Does the project increase impervious coverage or create permanent soil disturbance? Y ☐ N ☒
   b. If yes, is the project consistent with Subsection 60.2.3? Y ☐ N ☐

2. a. Does the project create temporary soil disturbance? Y ☒ N ☐
   b. If yes, is the project consistent with Subsection 60.4.3? Y ☒ N ☐

3. a. Does the project require the use of fertilizer? Y ☐ N ☒
   b. If yes, is the project consistent with Subsection 60.1.8? Y ☐ N ☐

4. a. Does the project include domestic wastewater discharge to the surface or groundwater? Y ☐ N ☒
   b. If yes, is the project consistent with Subsection 60.1.3.B? Y ☐ N ☐

5. a. Does the project disturb or encroach on an existing SEZ? Y ☒ N ☐
   b. If yes, is the project consistent with Subsection 30.5? Y ☒ N ☐

THRESHOLD: CLARITY, WINTER (IN LAKE)
INDICATOR: secch depth, Dec.-Mar. avg. TRG index station

1. a. Refer to questions 1-5, turbidity, above.

THRESHOLD: PHYTOPLANKTON PRIMARY PRODUCTIVITY (IN LAKE)
INDICATOR: phyto, primary productivity, ann. Avg., TRG index station

1. a. Refer to questions 1-5, turbidity, above.

THRESHOLD: DIN LOAD, SURFACE RUNOFF
INDICATOR: DIN x discharge, tributary network annual total 1

1. a. Refer to questions 1, 2, 3 and 5, turbidity, above.

THRESHOLD: DIN LOAD, GROUNDWATER
INDICATOR: DIN x discharge, grndwtr. Network, annual total

1. a. Refer to questions 2 & 3, turbidity, above.

THRESHOLD: DIN LOAD, ATMOSPHERIC
INDICATOR: NO3 + HNO, annual avg. Lake Tahoe Blvd station

1. a. Refer to question 4, turbidity, above.

THRESHOLD: NUTRIENT LOADS, GENERAL INDICATOR: sol. P x discharge sol. Fe x

1. a. Refer to questions 1-5, turbidity, above.

THRESHOLD: TOTAL N, P, Fe, (trib.) CA ONLY INDICATOR: single reading, tributary network

1. a. Refer to questions 1, 2, 3, and 5, turbidity, above.

THRESHOLD: DIN; SOL, P, Fe, SS (trib.) NV ONLY INDICATOR: single reading tributary network

1. a. Refer to questions 1, 2, 3 and 5, turbidity, above.

THRESHOLD: DIN, SOL, P, Fe, SS, GREASE/OIL DISCHARGED TO SURFACE WATER FROM RUNOFF
INDICATOR: single reading runoff sites

1. a. Does the project route impervious surface runoff directly into Lake Tahoe or a major tributary? Y ☐ N ☒
   b. If yes, is the discharge structure consistent with BMP handbook? Y ☐ N ☐

2. a. Does the project create large impervious areas (e.g. parking lots) which may serve as a source of airborne pollutants, grease or oil? Y ☐ N ☒
   b. If yes, is the project consistent with Subsections 60.4.3, 60.4.6, 60.4.9? Y ☐ N ☐

THRESHOLD: TOTAL N, TOTAL P, TOTAL Fe TURBIDITY, GREASE/OIL DISCHARGE TO GRDWTR FROM RUNOFF
INDICATOR: single reading runoff site

1. a. Does the project include infiltration devices to infiltrate impervious surface runoff directly underground? Y ☐ N ☒
   b. If yes, is the project consistent with Subsection 60.4.6? Y ☐ N ☐

CATEGORY: SOIL CONSERVATION

THESHOLD: IMPERVIOUS COVERAGE — INDICATOR: area or coverage

1. a. Does the project include new or relocated coverage? Y ☐ N ☒
   b. If yes, is the project consistent with Subsection 30.4, 30.5, 30.6? Y ☐ N ☐

THRESHOLD: NATURALLY-FUNCTIONING SEZ — INDICATOR: area of SEZ

1. a. Does the project disturb or encroach on a naturally-functioning SEZ? Y ☒ N ☐
   b. If yes, is the project consistent with Subsection 30.5? Y ☒ N ☐

CATEGORY: VEGETATION

THRESHOLD: PLANT & STRUCTURAL DIVERSITY — INDICATOR: plant & structural diversity

1. a. Does the project create a change in diversity? Y ☒ N ☐
   b. If yes, does the project include vegetation management techniques to increase diversity (reveg., thinning)? Y ☒ N ☐

THRESHOLD: MEADOW & RIPARIAN VEGETATION — INDICATOR: area of meadow & riparian veg.

1. a. Refer to question 5, turbidity, above.

THRESHOLD: DECIDUOUS RIPARIAN VEGETATION — INDICATOR: area of riparian vegetation

1. a. Refer to question 5, turbidity, above.

THRESHOLD: SHRUB ASSOCIATION — INDICATOR: area of shrub association

1. a. Does the project create an increase in the areal extent of the shrub association? Y ☐ N ☒
   b. If yes, has the additional area been calculated, and a determination been made that the total area is less than or equal to 25%? Y ☐ N ☐

THRESHOLD: YELLOW PINE ASSOCIATION (not mature) — INDICATOR: area of yellow pine assoc.

1. a. Does the project create a change in the areal extent of the immature yellow pine association? Y ☐ N ☒
   b. If yes, has the additional area been calculated, and a determination made that the total area in the Region is between 15 and 25%? Y ☐ N ☐

THRESHOLD: RED FIR ASSOCIATION — INDICATOR: area of red fir assoc.

1. a. Does the project create a change in the areal extent of the immature red fir association? Y ☐ N ☒
   b. If yes, has the additional are been calculated, and a determination made that the total area in the Region is between 15 and 25%? Y ☐ N ☐

THRESHOLD: FOREST OPENINGS — INDICATOR: size and location of forest openings

1. a. Does the project create new forest openings? Y ☒ N ☐
   b. If yes, is the new opening less than 8 acres? Y ☐ N ☒

2. a. Does the project create new forest openings adjacent to other openings? Y ☒ N ☐
   b. If yes, are the resultant adjacent openings not of the same relative age class or successional stage? Y ☐ N ☒

THRESHOLD: UNCOMMON PLANT COMMUNITITES — INDICATOR: habitat sites

1. a. Will the project impact the habitats for the deepwater sphagnum bog, Osgood Swamp, or the Freel Peak Cushing Plant Community? Y ☐ N ☒
   b. If yes, have modifications been included in the project to protect these plant communities? Y ☐ N ☐

THRESHOLD: SENSITIVE VEGETATION — INDICATOR: number of habitat sites

1. a. Will the project impact the habitats of the Carex paucifructus, the Lewis pyomaea longipetala, the Draba asterophora v., or the Rorippa subumbellata? Y ☐ N ☒
   b. If yes, have modifications been included in the project to protect these plant communities? Y ☐ N ☐

CATEGORY: WILDLIFE

THRESHOLD: SPECIAL INTEREST SPECIES — INDICATOR: number of habitat sites

1. a. Will the project result in the loss, modification or increased disturbance of habitat site for goshawk, osprey, bald eagle, (winter and nesting), golden eagle, peregrine falcon, waterfowl, or deer, as mapped on official TRPA maps? Y ☒ N ☐
   b. If yes, have modifications been included in the project to protect these habitat sites? Y ☒ N ☐

CATEGORY: FISHERIES

THRESHOLD: EXCELLENT STREAM HABITAT — INDICATOR: sites of excellent stream habitat

1. a. Does the project include stream channelization, stream dredging, removal of rock or gravel from a stream, culverts, bridges, or water diversions affecting a stream identified as fish habitat? Y ☐ N ☒
   b. If yes, have modifications been included in the project to offset impacts on stream habitat and contribute to the upgrading of stream habitat? Y ☐ N ☐

2. a. Will the project result in siltation, urban runoff, snow disposal, or litter that may affect water quality in a stream identified as fish habitat? Y ☐ N ☒
   b. If yes, is the project consistent with Subsections 60.4.3 and 60.4.6? Y ☐ N ☐

THRESHOLD: GOOD STREAM HABITAT — INDICATOR: miles of good stream habitat

1. a. Refer to questions 1 and 2, above.

THRESHOLD: MARGIANL STREAM HABITAT — INDICATOR: miles of marginal stream habitat

1. a. Refer to questions 1 and 2, above.

THRESHOLD: INSTREAM FLOWS — INDICATOR: increase flows

1. a. Does the project include new water diversions? Y ☐ N ☒
   b. If yes, is there evidence in the record to indicate that flows will remain within adopted TRPA standards or, in the absence of adopted standards, that flows will not be diminished? Y ☐ N ☐

2. a. Does the project include new coverage or disturbance that could contribute to uncontrolled runoff reaching a stream identified as fish habitat? Y ☐ N ☒
   b. If yes, is the project consistent with Subsections 60.4.3 and 60.4.6? Y ☐ N ☐

3. a. Refer to question 5, turbidity, above.

THRESHOLD: LAKE HABITAT — INDICATOR: area of excellent habitat

1. a. Does the project include development in the shorezone, removal of rock or gravel from the lake, or removal of vegetation in the shorezone? Y ☐ N ☒
   b. If yes, is the project consistent with Chapters 80-86? Y ☐ N ☐

2. a. Does the project increase the potential for siltation, runoff, or erosion entering Lake Tahoe? Y ☐ N ☒
   b. If yes, is the project consistent with Subsections 60.4.3 and 60.4.6? Y ☐ N ☐

CATEGORY: NOISE

THRESHOLD: SINGLE EVENT, AIRCRAFT, DAYTIME
INDICATOR: dBA, LMAX, TRPA ref. points, 8am-8pm, single reading

1. a. Does the project involve the commercial or private operation of aircraft? Y ☐ N ☒
   b. If yes, does the project comply with the Interim Service Agreement affecting aircraft operations at the South Lake Tahoe Airport, or will the project meet the TRPA noise thresholds, or is the project exempt under Code section 68.9? Y ☐ N ☐

THRESHOLD: SINGLE EVENT, AIRCRAFT, NIGHTTIME
INDICATOR: dBA, LMAX, TRPA ref. points, 8am-8pm, single reading

1. a. Refer to question 1, single event, aircraft, above.

THRESHOLD: SINGLE-EVENT, BOATS — INDICATOR: dBA, LMAX, at 50 ft., single reading

1. a. Does the project involve a marina or boat launching facility? Y ☐ N ☒
   b. If yes, is the project consistent with Subsection 68.3? Y ☐ N ☐

THRESHOLD: SINGLE-EVENT, MOTOR VEHICLE LESS THAN 6,000 LBS. CVM
INDICATOR: dBA, LMAX, at 50 ft., single reading

1. a. Does the project include the operation of fleet vehicles or other commercial vehicles? Y ☒ N ☐
   b. If yes, is the project consistent with Subsection 68.3? Y ☒ N ☐

THRESHOLD: SINGLE-EVENT, MOTOR VEHICLE GREATER THAN 6,000 LBS. CVM
INDICATOR: dBA, LMAX, at 50 ft., single reading

1. a. Refer to question 1, single event, motor vehicle, above.

THRESHOLD: SINGLE-EVENT, MOTORCYCLE INDICATOR: dBA, LMAX, at 50 ft., single reading

1. a. Does the project involve the offering of motorcycles for lease or rent or the operation of a motorcycle course? Y ☐ N ☒
   b. If yes, is the project consistent with Subsection 68.3? Y ☐ N ☐

THRESHOLD: SINGLE-EVENT, ORVS INDICATOR: dBA, LMAX, at 50 ft., single reading

1. a. Does the project involve the offering of ORVs for rent or lease or the operation of an ORV course? Y ☐ N ☒
   b. If yes, is the project consistent with Subsection 68.3? Y ☐ N ☐

THESHOLD: SINGLE-EVENT, SNOWMOBILES INDICATOR: dBA, LMAX, at 50 ft., single reading

1. a. Does the project involve the offering of snowmobiles for rent or lease or the operation of a snowmobile course? Y ☐ N ☒
   b. If yes, is the project consistent with Subsection 68.3? Y ☐ N ☐

THRESHOLD: COMMUNITY NOISE EQUIVALENT LEVEL (CNEL)

1. a. Does the project involve the creation of a new or relocated land use? Y ☐ N ☒
   b. If yes, is the project consistent with the applicable plan area statement? Y ☐ N ☐

2. a. Is the project located within a transportation corridor as mapped on TRPA maps? Y ☒ N ☐
   b. If yes, does the project include components to reduce the transmission of noise from the corridor, in accordance with the TRPA Design Review Guidelines? Y ☒ N ☐

3. a. Does the project involve a use or activity for which TRPA has received a CNEL related noise complaint and for which TRPA has required remedial action in accordance with Chapter 68? Y ☐ N ☒
   b. If yes, is the project consistent with the remedial action plan? Y ☐ N ☐

CATEGORY: SCENIC RESOURCES

THRESHOLD: ROADWAY AND SHORELINE RATINGS

1. a. Is the project located within, or visible from, a roadway or shoreline unit targeted for scenic upgrading? Y ☒ N ☐
   b. If yes, is the project consistent with the TRPA Scenic Quality Implementation Program (SQUIP)? Y ☒ N ☐

2. a. Is the project located within, or visible from, a roadway or shoreline unit not targeted for scenic upgrading? Y ☐ N ☒
   b. If yes, is there evidence in the record that the project will not cause a significant decrease in scenic quality, and is the project consistent with the TRPA Design Review Guidelines? Y ☐ N ☐

CATEGORY: RECREATION

THRESHOLD: PRESERVE AND ENHANCE THE HIGH QUALITY RECREATION EXPERIENCE
INDICATOR: dispersed rec. capacity

1. a. Is the project located in a conservation or recreation plan area? Y ☐ N ☒
   b. If yes, is the project consistent with the applicable plan area statement? Y ☐ N ☐

THRESHOLD: ESTABLISH FAIR SHARE OF CAPACITY FOR OUTDOOR RECREATION AVAILABLE TO THE GENERAL PUBLIC
INDICATOR: PAOTs

1. a. Does the project require an allocation of PAOTs? Y ☐ N ☒
   b. If yes, is the recreational opportunity involved available to the public? Y ☐ N ☐

CATEGORY: CODE/RULES OF PROCEDURE REQUIREMENTS

1. Does the project require Governing Board Review (Chapter 2)? Y ☐ N ☒

5. Does the project require notice to adjacent property owners (Art. XII Rules of Procedure)? Y ☐ N ☒

6. Is the project consistent with the following:

Chapter 2	(Project Review)	N/A ☐	Y ☐	N ☒
Chapter 6	(Tracking-Data Sheets/Log Book)	N/A ☐	Y ☐	N ☒
Chapter 21	(Permissible Uses)	N/A ☐	Y ☐	N ☒
Chapter 22	(Temporary Uses)	N/A ☐	Y ☐	N ☒
Chapter 30	(Coverage)	N/A ☒	Y ☐	N ☐
Chapter 31	(Density)	N/A ☒	Y ☐	N ☐
Chapter 32	(Basic Service)	N/A ☒	Y ☐	N ☐
Chapter 33.3	(Grading)	N/A ☒	Y ☐	N ☐
Chapter 33.4	(Special Reports)	N/A ☒	Y ☐	N ☐
Chapter 33.5	(Construction Schedule)	N/A ☒	Y ☐	N ☐
Chapter 33.6	(Vegetation Protection)	N/A ☒	Y ☐	N ☐
Chapter 34	(Driveways)	N/A ☒	Y ☐	N ☐
Chapter 34	(Parking)	N/A ☒	Y ☐	N ☐
Chapter 35	(Natural Hazards-Floodplain)	N/A ☒	Y ☐	N ☐
Chapter 36	(Design Standards)	N/A ☒	Y ☐	N ☐
Chapter 37	(Height)	N/A ☒	Y ☐	N ☐
Chapter 38	(Signs)	N/A ☒	Y ☐	N ☐
Chapter 50	(Allocations)	N/A ☒	Y ☐	N ☐
Chapter 51	(Transfers)	N/A ☒	Y ☐	N ☐
Chapter 52	(Bonus Units-MFD only)	N/A ☒	Y ☐	N ☐
Chapter 53	(IPES)	N/A ☐	Y ☒	N ☐
Chapter 60	(BMP's)	N/A ☐	Y ☒	N ☐
Chapter 60.1	(Water Quality)	N/A ☐	Y ☒	N ☐
Chapter 60.2	(Water Quality Mitigation)	N/A ☐	Y ☒	N ☐
Chapter 61.1	(Tree Removal)	N/A ☐	Y ☒	N ☐
Chapter 61.3.6	(Sensitive Plants/Fire Hazard)	N/A ☐	Y ☒	N ☐
Chapter 61.4	(Revegetation)	N/A ☐	Y ☒	N ☐
Chapter 62	(Wildlife)	N/A ☐	Y ☒	N ☐
Chapter 63	(Fish)	N/A ☐	Y ☒	N ☐
Chapter 65.1	(Air Quality)	N/A ☐	Y ☒	N ☐
Chapter 65.2	(Traffic/Air Quality Mitigation)	N/A ☐	Y ☒	N ☐
Chapter 67	(Historic Resource)	N/A ☐	Y ☒	N ☐

APPROVED

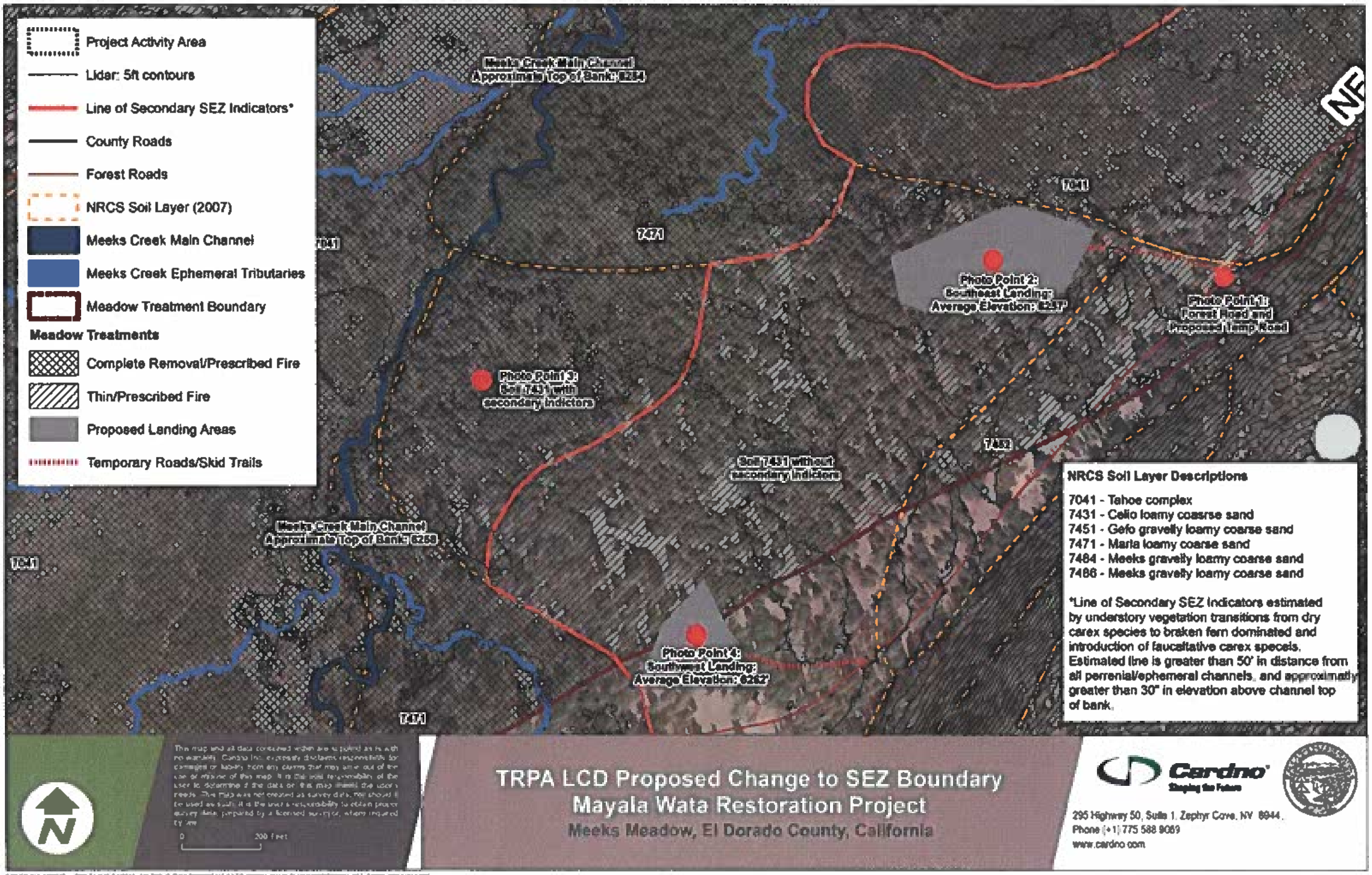
~~[struck-through text]~~ *

Approved on

DEC 10 2018

[signature]

EXECUTIVE DIRECTOR / DESIGNEE
TAHOE REGIONAL PLANNING AGENCY



From:	Bruce Barr
To:	Melanie Greene
Cc:	Shannon Friedman
Subject:	SEZ
Date:	Monday, December 10, 2018 1:33:32 PM
Attachments:	image001.png Landing Map.pdf

Hello Melanie,

TRPA staff has made site visits and made the following determination : TRPA approves the changes to the SEZ boundary as depicted on Figure 1 of Attachment D and concurs that the proposed landing locations are outside of an SEZ. This approval is for the purposes of this project only and future projects may require a site specific SEZ delineation. Please see attached Map.

Sincerely,

Bruce Barr
Tahoe Regional Planning Agency – Forester
bbarr@trpa.org
775 589-5294
CA RPF # 2954, ISA # WE-10271AU

Mayala Wata Restoration Project at Meeks Meadow
Initial Study/Negative Declaration

APPENDIX C

CALEEMOD EMISSIONS OUTPUT FILES

Mayala Wata Restoration Project at Meeks Meadow

Lake Tahoe Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	300.00	Acre	300.00	13,068,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	72
Climate Zone	14			**Operational Year**	2023
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - City Park land use type selected: similar construction phasing and equipment to Project
No buildings

Construction Phase - Layout and Site Preparation and Hand Thinning: Site Preparation Phase Type
Road and Landing Preparation and Mechanical Removal: Grading Phase Type

Off-road Equipment - Hand Thinning Phase: (6) 4WD trucks, (12) chainsaws, (1) dozer, (1) backhoe. Material to be moved and hauled with equipment under the Mechanical Thinning phase.

Off-road Equipment - Layout Phase: (1) dozer, (2) 4WD trucks, (1) loader

Off-road Equipment - Mechanical Removal Phase: Although logging specific equipment will be utilized, default equipment listed here is representative of the size, HP, and loading factors of equipment to be used for the Project, therefore the default setting have been used.

Off-road Equipment - Mechanical Removal Phase: Although logging specific equipment will be utilized, default equipment listed here is representative of the size, HP, and loading factors of equipment to be used for the Project, therefore the default setting have been used.

Off-road Equipment - Mechanical Removal Phase: Although logging specific equipment will be utilized, default equipment listed here is representative of the

size, HP, and loading factors of equipment to be used for the Project, therefore the default setting have been used.

Off-road Equipment - Road and Landing Prep Phase: (2) 4WD trucks, (1) grader, (1) dozer, (1) scraper, (1) backhoe

Grading - Layout and Site Prep: 0 acres
Hand Thinning: 0 acres
Road and Landing Prep: Temp Roads (0.25 acres), Landings (6.25 acres), existing road maintenance (2.5 acres) = 9 acres
Mechanical Removal: (300) acres over (3) seasons = 100 acres/phase

Vehicle Trips - No change in operation use. All set to (0)

Road Dust - No pavement

Area Coating - No changes to current condition

Water And Wastewater - No water, electricity, or waste facilities used

Solid Waste - No generation

Land Use Change - Vegations Land Use Type changes addressed seperately

Fleet Mix -

Demolition - No demolition

Trips and VMT - Trips Worker: Utilized default setting, based on number of equipment specified per phase (with the exception of hand thinning - reduced to a 15 person crew)
No Trips Vendor
Trips Hauling: Assume (4) log truck trips per day for Mechanical Removal phase
TripLegnth Worker: Assume South Lake Tahoe to Meeks Bay (20 miles)
TripLegnth Hauling: Assume Meeks Bay to SPI Quincy Mill (100 miles)

On-road Fugitive Dust - No paving onsite, but pavement exists for worker trips and hauling trips

Consumer Products - No consumer products or landscaping to be conducted

Landscape Equipment - No landscaping equipment to be used during operations

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	180.00	55.00
tblConstructionPhase	NumDays	465.00	55.00
tblConstructionPhase	NumDays	180.00	55.00
tblConstructionPhase	NumDays	465.00	110.00
tblConstructionPhase	NumDays	465.00	110.00

Mayala Wata Restoration Project at Meeks Meadow - Lake Tahoe Air Basin, Annual

tblConstructionPhase	NumDays	465.00	110.00
tblGrading	AcresOfGrading	82.50	9.00
tblGrading	AcresOfGrading	275.00	100.00
tblGrading	AcresOfGrading	275.00	100.00
tblGrading	AcresOfGrading	275.00	100.00
tblGrading	AcresOfGrading	275.00	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	LandfillCaptureGasFlare	94.00	0.00
tblSolidWaste	SolidWasteGenerationRate	25.80	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	100.00
tblTripsAndVMT	HaulingTripLength	20.00	100.00
tblTripsAndVMT	HaulingTripLength	20.00	100.00

tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	0.00
tblTripsAndVMT	WorkerTripNumber	50.00	30.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00

tblVehicleTrips	WD_TR	1.89	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	OutdoorWaterUseRate	357,444,404.90	0.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.5377	5.0548	3.4650	7.8100e-003	0.5256	0.2364	0.7620	0.2800	0.2236	0.5036	0.0000	693.5237	693.5237	0.1696	0.0000	697.7629
2020	0.2567	2.7686	1.8430	3.5700e-003	0.4003	0.1197	0.5200	0.1921	0.1101	0.3022	0.0000	314.4857	314.4857	0.0975	0.0000	316.9237
2021	0.2416	2.5589	1.7744	3.5700e-003	0.4003	0.1093	0.5096	0.1921	0.1006	0.2926	0.0000	314.0475	314.0475	0.0975	0.0000	316.4843
2022	0.2113	2.1432	1.6755	3.5700e-003	0.7453	0.0901	0.8354	0.3775	0.0829	0.4604	0.0000	313.9784	313.9784	0.0975	0.0000	316.4165
Maximum	**0.5377**	**5.0548**	**3.4650**	**7.8100e-003**	**0.7453**	**0.2364**	**0.8354**	**0.3775**	**0.2236**	**0.5036**	**0.0000**	**693.5237**	**693.5237**	**0.1696**	**0.0000**	**697.7629**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.5377	5.0548	3.4650	7.8100e-003	0.5256	0.2364	0.7620	0.2800	0.2236	0.5036	0.0000	693.5229	693.5229	0.1696	0.0000	697.7621
2020	0.2567	2.7686	1.8430	3.5700e-003	0.4003	0.1197	0.5200	0.1921	0.1101	0.3022	0.0000	314.4853	314.4853	0.0975	0.0000	316.9234
2021	0.2416	2.5589	1.7744	3.5700e-003	0.4003	0.1093	0.5096	0.1921	0.1006	0.2926	0.0000	314.0472	314.0472	0.0975	0.0000	316.4839
2022	0.2113	2.1432	1.6755	3.5700e-003	0.7453	0.0901	0.8354	0.3775	0.0829	0.4604	0.0000	313.9780	313.9780	0.0975	0.0000	316.4161
Maximum	**0.5377**	**5.0548**	**3.4650**	**7.8100e-003**	**0.7453**	**0.2364**	**0.8354**	**0.3775**	**0.2236**	**0.5036**	**0.0000**	**693.5229**	**693.5229**	**0.1696**	**0.0000**	**697.7621**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**5-15-2019**	**8-14-2019**	1.7920	1.7920
2	**8-15-2019**	**11-14-2019**	3.7985	3.7985
5	**5-15-2020**	**8-14-2020**	1.8061	1.8061
6	**8-15-2020**	**11-14-2020**	1.2176	1.2176
9	**5-15-2021**	**8-14-2021**	1.6720	1.6720
10	**8-15-2021**	**11-14-2021**	1.1272	1.1272
13	**5-15-2022**	**8-14-2022**	1.4056	1.4056
14	**8-15-2022**	**9-30-2022**	0.7181	0.7181

		Highest	3.7985	3.7985

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1231	3.0000e-005	2.7600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1231**	**3.0000e-005**	**2.7600e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3600e-003**	**5.3600e-003**	**1.0000e-005**	**0.0000**	**5.7100e-003**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1231	3.0000e-005	2.7600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1231**	**3.0000e-005**	**2.7600e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3600e-003**	**5.3600e-003**	**1.0000e-005**	**0.0000**	**5.7100e-003**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Layout and Site Preparation	Site Preparation	5/15/2019	7/30/2019	5	55	
2	Hand Thinning	Site Preparation	7/31/2019	10/15/2019	5	55	
3	Road and Landing Preparation	Grading	7/31/2019	10/15/2019	5	55	
4	Mechanical Removal - 2020	Grading	5/15/2020	10/15/2020	5	110	
5	Mechanical Removal - 2021	Grading	5/15/2021	10/15/2021	5	110	
6	Mechanical Removal - 2022	Grading	5/15/2022	10/15/2022	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Layout and Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Layout and Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Road and Landing Preparation	Excavators	2	8.00	158	0.38
Road and Landing Preparation	Graders	1	8.00	187	0.41
Layout and Site Preparation	Off-Highway Trucks	2	8.00	402	0.38
Road and Landing Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Road and Landing Preparation	Scrapers	1	8.00	367	0.48
Road and Landing Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Hand Thinning	Off-Highway Trucks	6	8.00	402	0.38
Hand Thinning	Concrete/Industrial Saws	12	8.00	81	0.73

Road and Landing Preparation	Off-Highway Trucks	2	8.00	402	0.38
Hand Thinning	Rubber Tired Dozers	1	8.00	247	0.40
Hand Thinning	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Mechanical Removal - 2020	Excavators	2	8.00	158	0.38
Mechanical Removal - 2020	Graders	1	8.00	187	0.41
Mechanical Removal - 2020	Rubber Tired Dozers	1	8.00	247	0.40
Mechanical Removal - 2020	Scrapers	2	8.00	367	0.48
Mechanical Removal - 2020	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Mechanical Removal - 2021	Excavators	2	8.00	158	0.38
Mechanical Removal - 2021	Graders	1	8.00	187	0.41
Mechanical Removal - 2021	Rubber Tired Dozers	1	8.00	247	0.40
Mechanical Removal - 2021	Scrapers	2	8.00	367	0.48
Mechanical Removal - 2021	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Mechanical Removal - 2022	Excavators	2	8.00	158	0.38
Mechanical Removal - 2022	Graders	1	8.00	187	0.41
Mechanical Removal - 2022	Rubber Tired Dozers	1	8.00	247	0.40
Mechanical Removal - 2022	Scrapers	2	8.00	367	0.48
Mechanical Removal - 2022	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Layout and Site Preparation	4	10.00	0.00	0.00	20.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT
Road and Landing Preparation	8	20.00	0.00	0.00	20.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT
Hand Thinning	20	30.00	0.00	0.00	20.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT
Mechanical Removal - 2020	8	20.00	0.00	0.00	20.00	0.00	100.00	LD_Mix	HDT_Mix	HHDT
Mechanical Removal - 2021	8	20.00	0.00	0.00	20.00	0.00	100.00	LD_Mix	HDT_Mix	HHDT
Mechanical Removal - 2022	8	20.00	0.00	0.00	20.00	0.00	100.00	LD_Mix	HDT_Mix	HHDT
Mechanical Removal - 2023	8	20.00	0.00	0.00	0.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Layout and Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1656	0.0000	0.1656	0.0910	0.0000	0.0910	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0767	0.7918	0.4010	1.0500e-003		0.0349	0.0349		0.0321	0.0321	0.0000	94.0133	94.0133	0.0297	0.0000	94.7569
Total	**0.0767**	**0.7918**	**0.4010**	**1.0500e-003**	**0.1656**	**0.0349**	**0.2005**	**0.0910**	**0.0321**	**0.1231**	**0.0000**	**94.0133**	**94.0133**	**0.0297**	**0.0000**	**94.7569**

3.2 Layout and Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2300e-003	2.1700e-003	0.0241	4.0000e-005	4.0000e-003	4.0000e-005	4.0400e-003	1.0600e-003	4.0000e-005	1.1000e-003	0.0000	3.8212	3.8212	1.7000e-004	0.0000	3.8256
Total	**3.2300e-003**	**2.1700e-003**	**0.0241**	**4.0000e-005**	**4.0000e-003**	**4.0000e-005**	**4.0400e-003**	**1.0600e-003**	**4.0000e-005**	**1.1000e-003**	**0.0000**	**3.8212**	**3.8212**	**1.7000e-004**	**0.0000**	**3.8256**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1656	0.0000	0.1656	0.0910	0.0000	0.0910	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0767	0.7918	0.4010	1.0500e-003		0.0349	0.0349		0.0321	0.0321	0.0000	94.0132	94.0132	0.0297	0.0000	94.7568
Total	**0.0767**	**0.7918**	**0.4010**	**1.0500e-003**	**0.1656**	**0.0349**	**0.2005**	**0.0910**	**0.0321**	**0.1231**	**0.0000**	**94.0132**	**94.0132**	**0.0297**	**0.0000**	**94.7568**

3.2 Layout and Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2300e-003	2.1700e-003	0.0241	4.0000e-005	4.0000e-003	4.0000e-005	4.0400e-003	1.0600e-003	4.0000e-005	1.1000e-003	0.0000	3.8212	3.8212	1.7000e-004	0.0000	3.8256
Total	**3.2300e-003**	**2.1700e-003**	**0.0241**	**4.0000e-005**	**4.0000e-003**	**4.0000e-005**	**4.0400e-003**	**1.0600e-003**	**4.0000e-005**	**1.1000e-003**	**0.0000**	**3.8212**	**3.8212**	**1.7000e-004**	**0.0000**	**3.8256**

3.3 Hand Thinning - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1656	0.0000	0.1656	0.0910	0.0000	0.0910	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3078	2.7728	2.0656	4.5800e-003		0.1396	0.1396		0.1344	0.1344	0.0000	402.9179	402.9179	0.0838	0.0000	405.0137
Total	**0.3078**	**2.7728**	**2.0656**	**4.5800e-003**	**0.1656**	**0.1396**	**0.3052**	**0.0910**	**0.1344**	**0.2255**	**0.0000**	**402.9179**	**402.9179**	**0.0838**	**0.0000**	**405.0137**

3.3 Hand Thinning - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6900e-003	6.5100e-003	0.0723	1.3000e-004	0.0120	1.2000e-004	0.0121	3.1900e-003	1.1000e-004	3.3000e-003	0.0000	11.4637	11.4637	5.2000e-004	0.0000	11.4768
Total	**9.6900e-003**	**6.5100e-003**	**0.0723**	**1.3000e-004**	**0.0120**	**1.2000e-004**	**0.0121**	**3.1900e-003**	**1.1000e-004**	**3.3000e-003**	**0.0000**	**11.4637**	**11.4637**	**5.2000e-004**	**0.0000**	**11.4768**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1656	0.0000	0.1656	0.0910	0.0000	0.0910	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3078	2.7728	2.0656	4.5800e-003		0.1396	0.1396		0.1344	0.1344	0.0000	402.9174	402.9174	0.0838	0.0000	405.0132
Total	**0.3078**	**2.7728**	**2.0656**	**4.5800e-003**	**0.1656**	**0.1396**	**0.3052**	**0.0910**	**0.1344**	**0.2255**	**0.0000**	**402.9174**	**402.9174**	**0.0838**	**0.0000**	**405.0132**

3.3 Hand Thinning - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6900e-003	6.5100e-003	0.0723	1.3000e-004	0.0120	1.2000e-004	0.0121	3.1900e-003	1.1000e-004	3.3000e-003	0.0000	11.4637	11.4637	5.2000e-004	0.0000	11.4768
Total	**9.6900e-003**	**6.5100e-003**	**0.0723**	**1.3000e-004**	**0.0120**	**1.2000e-004**	**0.0121**	**3.1900e-003**	**1.1000e-004**	**3.3000e-003**	**0.0000**	**11.4637**	**11.4637**	**5.2000e-004**	**0.0000**	**11.4768**

3.4 Road and Landing Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1704	0.0000	0.1704	0.0916	0.0000	0.0916	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1339	1.4773	0.8538	1.9300e-003		0.0618	0.0618		0.0568	0.0568	0.0000	173.6652	173.6652	0.0550	0.0000	175.0388
Total	**0.1339**	**1.4773**	**0.8538**	**1.9300e-003**	**0.1704**	**0.0618**	**0.2322**	**0.0916**	**0.0568**	**0.1484**	**0.0000**	**173.6652**	**173.6652**	**0.0550**	**0.0000**	**175.0388**

3.4 Road and Landing Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4600e-003	4.3400e-003	0.0482	8.0000e-005	8.0000e-003	8.0000e-005	8.0800e-003	2.1300e-003	7.0000e-005	2.2000e-003	0.0000	7.6425	7.6425	3.5000e-004	0.0000	7.6512
Total	**6.4600e-003**	**4.3400e-003**	**0.0482**	**8.0000e-005**	**8.0000e-003**	**8.0000e-005**	**8.0800e-003**	**2.1300e-003**	**7.0000e-005**	**2.2000e-003**	**0.0000**	**7.6425**	**7.6425**	**3.5000e-004**	**0.0000**	**7.6512**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1704	0.0000	0.1704	0.0916	0.0000	0.0916	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1339	1.4773	0.8538	1.9300e-003		0.0618	0.0618		0.0568	0.0568	0.0000	173.6650	173.6650	0.0550	0.0000	175.0386
Total	**0.1339**	**1.4773**	**0.8538**	**1.9300e-003**	**0.1704**	**0.0618**	**0.2322**	**0.0916**	**0.0568**	**0.1484**	**0.0000**	**173.6650**	**173.6650**	**0.0550**	**0.0000**	**175.0386**

3.4 Road and Landing Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4600e-003	4.3400e-003	0.0482	8.0000e-005	8.0000e-003	8.0000e-005	8.0800e-003	2.1300e-003	7.0000e-005	2.2000e-003	0.0000	7.6425	7.6425	3.5000e-004	0.0000	7.6512
Total	**6.4600e-003**	**4.3400e-003**	**0.0482**	**8.0000e-005**	**8.0000e-003**	**8.0000e-005**	**8.0800e-003**	**2.1300e-003**	**7.0000e-005**	**2.2000e-003**	**0.0000**	**7.6425**	**7.6425**	**3.5000e-004**	**0.0000**	**7.6512**

3.5 Mechanical Removal - 2020 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3842	0.0000	0.3842	0.1878	0.0000	0.1878	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2448	2.7609	1.7577	3.4100e-003		0.1196	0.1196		0.1100	0.1100	0.0000	299.6636	299.6636	0.0969	0.0000	302.0865
Total	**0.2448**	**2.7609**	**1.7577**	**3.4100e-003**	**0.3842**	**0.1196**	**0.5038**	**0.1878**	**0.1100**	**0.2978**	**0.0000**	**299.6636**	**299.6636**	**0.0969**	**0.0000**	**302.0865**

3.5 Mechanical Removal - 2020 - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0119	7.7600e-003	0.0853	1.6000e-004	0.0160	1.5000e-004	0.0162	4.2600e-003	1.4000e-004	4.4000e-003	0.0000	14.8221	14.8221	6.1000e-004	0.0000	14.8372
Total	**0.0119**	**7.7600e-003**	**0.0853**	**1.6000e-004**	**0.0160**	**1.5000e-004**	**0.0162**	**4.2600e-003**	**1.4000e-004**	**4.4000e-003**	**0.0000**	**14.8221**	**14.8221**	**6.1000e-004**	**0.0000**	**14.8372**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3842	0.0000	0.3842	0.1878	0.0000	0.1878	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2448	2.7609	1.7577	3.4100e-003		0.1196	0.1196		0.1100	0.1100	0.0000	299.6633	299.6633	0.0969	0.0000	302.0862
Total	**0.2448**	**2.7609**	**1.7577**	**3.4100e-003**	**0.3842**	**0.1196**	**0.5038**	**0.1878**	**0.1100**	**0.2978**	**0.0000**	**299.6633**	**299.6633**	**0.0969**	**0.0000**	**302.0862**

3.5 Mechanical Removal - 2020 - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0119	7.7600e-003	0.0853	1.6000e-004	0.0160	1.5000e-004	0.0162	4.2600e-003	1.4000e-004	4.4000e-003	0.0000	14.8221	14.8221	6.1000e-004	0.0000	14.8372
Total	**0.0119**	**7.7600e-003**	**0.0853**	**1.6000e-004**	**0.0160**	**1.5000e-004**	**0.0162**	**4.2600e-003**	**1.4000e-004**	**4.4000e-003**	**0.0000**	**14.8221**	**14.8221**	**6.1000e-004**	**0.0000**	**14.8372**

3.6 Mechanical Removal - 2021 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3842	0.0000	0.3842	0.1878	0.0000	0.1878	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2305	2.5520	1.6983	3.4100e-003		0.1092	0.1092		0.1005	0.1005	0.0000	299.7224	299.7224	0.0969	0.0000	302.1458
Total	**0.2305**	**2.5520**	**1.6983**	**3.4100e-003**	**0.3842**	**0.1092**	**0.4934**	**0.1878**	**0.1005**	**0.2883**	**0.0000**	**299.7224**	**299.7224**	**0.0969**	**0.0000**	**302.1458**

3.6 Mechanical Removal - 2021 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0111	6.9500e-003	0.0761	1.6000e-004	0.0160	1.4000e-004	0.0162	4.2600e-003	1.3000e-004	4.3900e-003	0.0000	14.3251	14.3251	5.3000e-004	0.0000	14.3385
Total	**0.0111**	**6.9500e-003**	**0.0761**	**1.6000e-004**	**0.0160**	**1.4000e-004**	**0.0162**	**4.2600e-003**	**1.3000e-004**	**4.3900e-003**	**0.0000**	**14.3251**	**14.3251**	**5.3000e-004**	**0.0000**	**14.3385**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3842	0.0000	0.3842	0.1878	0.0000	0.1878	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2305	2.5520	1.6983	3.4100e-003		0.1092	0.1092		0.1005	0.1005	0.0000	299.7220	299.7220	0.0969	0.0000	302.1455
Total	**0.2305**	**2.5520**	**1.6983**	**3.4100e-003**	**0.3842**	**0.1092**	**0.4934**	**0.1878**	**0.1005**	**0.2883**	**0.0000**	**299.7220**	**299.7220**	**0.0969**	**0.0000**	**302.1455**

3.6 Mechanical Removal - 2021 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0111	6.9500e-003	0.0761	1.6000e-004	0.0160	1.4000e-004	0.0162	4.2600e-003	1.3000e-004	4.3900e-003	0.0000	14.3251	14.3251	5.3000e-004	0.0000	14.3385
Total	**0.0111**	**6.9500e-003**	**0.0761**	**1.6000e-004**	**0.0160**	**1.4000e-004**	**0.0162**	**4.2600e-003**	**1.3000e-004**	**4.3900e-003**	**0.0000**	**14.3251**	**14.3251**	**5.3000e-004**	**0.0000**	**14.3385**

3.7 Mechanical Removal - 2022 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7155	0.0000	0.7155	0.3699	0.0000	0.3699	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1994	2.1364	1.5973	3.4100e-003		0.0899	0.0899		0.0827	0.0827	0.0000	299.9403	299.9403	0.0970	0.0000	302.3655
Total	**0.1994**	**2.1364**	**1.5973**	**3.4100e-003**	**0.7155**	**0.0899**	**0.8054**	**0.3699**	**0.0827**	**0.4526**	**0.0000**	**299.9403**	**299.9403**	**0.0970**	**0.0000**	**302.3655**

3.7 Mechanical Removal - 2022 - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0119	6.7800e-003	0.0782	1.6000e-004	0.0298	1.4000e-004	0.0300	7.6600e-003	1.3000e-004	7.7900e-003	0.0000	14.0381	14.0381	5.2000e-004	0.0000	14.0510
Total	**0.0119**	**6.7800e-003**	**0.0782**	**1.6000e-004**	**0.0298**	**1.4000e-004**	**0.0300**	**7.6600e-003**	**1.3000e-004**	**7.7900e-003**	**0.0000**	**14.0381**	**14.0381**	**5.2000e-004**	**0.0000**	**14.0510**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7155	0.0000	0.7155	0.3699	0.0000	0.3699	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1994	2.1364	1.5973	3.4100e-003		0.0899	0.0899		0.0827	0.0827	0.0000	299.9399	299.9399	0.0970	0.0000	302.3651
Total	**0.1994**	**2.1364**	**1.5973**	**3.4100e-003**	**0.7155**	**0.0899**	**0.8054**	**0.3699**	**0.0827**	**0.4526**	**0.0000**	**299.9399**	**299.9399**	**0.0970**	**0.0000**	**302.3651**

3.7 Mechanical Removal - 2022 - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0119	6.7800e-003	0.0782	1.6000e-004	0.0298	1.4000e-004	0.0300	7.6600e-003	1.3000e-004	7.7900e-003	0.0000	14.0381	14.0381	5.2000e-004	0.0000	14.0510
Total	**0.0119**	**6.7800e-003**	**0.0782**	**1.6000e-004**	**0.0298**	**1.4000e-004**	**0.0300**	**7.6600e-003**	**1.3000e-004**	**7.7900e-003**	**0.0000**	**14.0381**	**14.0381**	**5.2000e-004**	**0.0000**	**14.0510**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.511039	0.037194	0.219950	0.126430	0.033608	0.007094	0.025934	0.025926	0.002795	0.001211	0.006699	0.000783	0.001337

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1231	3.0000e-005	2.7600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-003
Unmitigated	0.1231	3.0000e-005	2.7600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6000e-004	3.0000e-005	2.7600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-003
Total	**0.1231**	**3.0000e-005**	**2.7600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3600e-003**	**5.3600e-003**	**1.0000e-005**	**0.0000**	**5.7100e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6000e-004	3.0000e-005	2.7600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-003
Total	**0.1231**	**3.0000e-005**	**2.7600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3600e-003**	**5.3600e-003**	**1.0000e-005**	**0.0000**	**5.7100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Mayala Wata Restoration Project at
Meeks Meadow
Initial Study/Negative Declaration

APPENDIX D

BIOLOGICAL RESOURCE DATA

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301
http://www.fws.gov/nevada/

In Reply Refer To: November 05, 2018
Consultation Code: 08ENVD00-2019-SLI-0060
Event Code: 08ENVD00-2019-E-00149
Project Name: Mayala Wata Restoration Project at Meeks Meadow

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

To Whom It May Concern:

The attached species list indicates threatened, endangered, proposed, and candidate species and designated or proposed critical habitat that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (ESA, 16 U.S.C. 1531 *et seq*.), for projects that are authorized, funded, or carried out by a Federal agency. Candidate species have no protection under the ESA but are included for consideration because they could be listed prior to the completion of your project. Consideration of these species during project planning may assist species conservation efforts and may prevent the need for future listing actions. For additional information regarding species that may be found in the proposed project area, visit http://www.fws.gov/nevada/es/ipac.html.

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

A Biological Assessment is required for construction projects that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or

designated or proposed critical habitat. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html.

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

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

The Nevada Fish and Wildlife Office (NFWO) no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

For a list of at-risk species by county, visit Heritage's website (http://heritage.nv.gov). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (http://heritage.nv.gov/get_data) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (http://www.leg.state.nv.us/NAC/NAC-503.html). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to take, or possess any parts of protected fish and wildlife species. Please visit http://www.ndow.org or contact NDOW in northern Nevada (775) 688-1500, in southern Nevada (702) 486-5127, or in eastern Nevada (775) 777-2300.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq*.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Service's wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

The Service's Pacific Southwest Region developed the *Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities* (Interim Guidelines). This document provides energy facility developers with a tool for assessing the risk of potential impacts to wildlife resources and delineates how best to design and operate a bird- and bat-friendly wind facility. These Interim Guidelines are available upon request from the NFWO. The intent of a Bird and Bat Conservation Strategy is to conserve wildlife resources while supporting project developers through: (1) establishing project development in an adaptive management framework; (2) identifying proper siting and project design strategies; (3) designing and implementing pre-construction surveys; (4) implementing appropriate conservation measures for each development phase; (5) designing and implementing appropriate post-construction monitoring strategies; (6) using post-construction studies to better understand the dynamics of mortality reduction (*e.g.*, changes in blade cut-in speed, assessments of blade “feathering” success, and studies on the effects of visual and acoustic deterrents) including efforts tied into Before-After/Control-Impact analysis; and (7) conducting a thorough risk assessment and validation leading to adjustments in management and mitigation actions.

The template and recommendations set forth in the Interim Guidelines were based upon the Avian Powerline Interaction Committee's Avian Protection Plan template (http://www.aplic.org/) developed for electric utilities and modified accordingly to address the unique concerns of wind energy facilities. These recommendations are also consistent with the Service's wind energy guidelines. We recommend contacting us as early as possible in the planning process to discuss the need and process for developing a site-specific Bird and Bat Conservation Strategy.

The Service has also developed guidance regarding wind power development in relation to prairie grouse leks (sage-grouse are included in this). This document can be found at: http://www.fws.gov/southwest/es/Oklahoma/documents/te_species/wind%20power/prairie%20grouse%20lek%205%20mile%20public.pdf.

Migratory Birds are a Service Trust Resource. Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 *et seq*.), we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to

avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Guidance for minimizing impacts to migratory birds for projects involving communications towers (*e.g.*, cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

If wetlands, springs, or streams are are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit. For projects located in northern Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, and Washoe Counties) contact the Reno Regulatory Office at 300 Booth Street, Room 3060, Reno, Nevada 89509, (775) 784-5304; in southern Nevada (Clark, Lincoln, Nye, and White Pine Counties) contact the St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 84790-7314, (435) 986-3979; or in California along the eastern Sierra contact the Sacramento Regulatory Office at 650 Capitol Mall, Suite 5-200, Sacramento, California 95814, (916) 557-5250.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*

Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO
Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO
Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO
Del Norte	All	All	AFWO
El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Humboldt	All except Shasta Trinity National Forest	All	AFWO

Humboldt	Shasta Trinity National Forest	All	YFWO
Lake	Mendocino National Forest	All	AFWO
Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)
Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Modoc	Modoc National Forest	All	KFWO
Modoc	BLM Alturas Resource Area	All	KFWO
Modoc	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Modoc	BLM Surprise and Eagle Lake Resource Areas	All	RFWO

Modoc	All other ownerships	All	By jurisdiction (See map)
Mono	Inyo National Forest	All	RFWO
Mono	Humboldt Toiyabe National Forest	All	RFWO
Napa	All ownerships but tidal/estuarine	All	SFWO
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)
Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO
Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO

San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO
Shasta	BLM Alturas Resource Area	All	KFWO
Shasta	Caltrans	By jurisdiction	SFWO/AFWO
Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Siskiyou	Klamath National Forest (except Ukonom District)	All	YFWO
Siskiyou	Six Rivers National Forest and Ukonom District	All	AFWO
Siskiyou	Shasta Trinity National Forest	All	YFWO

Siskiyou	Lassen National Forest	All	SFWO
Siskiyou	Modoc National Forest	All	KFWO
Siskiyou	Lava Beds National Volcanic Monument	All	KFWO
Siskiyou	BLM Alturas Resource Area	All	KFWO
Siskiyou	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Siskiyou	All other ownerships	All	By jurisdiction (see map)
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)
Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
Tehama	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Trinity	BLM	All	AFWO
Trinity	Six Rivers National Forest	All	AFWO
Trinity	Shasta Trinity National Forest	All	YFWO

Trinity	Mendocino National Forest	All	AFWO
Trinity	BIA (Tribal Trust Lands)	All	AFWO
Trinity	County Government	All	AFWO
Trinity	All other ownerships	All	By jurisdiction (See map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO

***Office Leads:**

AFWO=Arcata Fish and Wildlife Office

BDFWO=Bay Delta Fish and Wildlife Office

KFWO=Klamath Falls Fish and Wildlife Office

RFWO=Reno Fish and Wildlife Office

YFWO=Yreka Fish and Wildlife Office

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

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

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

Project Summary

Consultation Code: 08ENVD00-2019-SLI-0060

Event Code: 08ENVD00-2019-E-00149

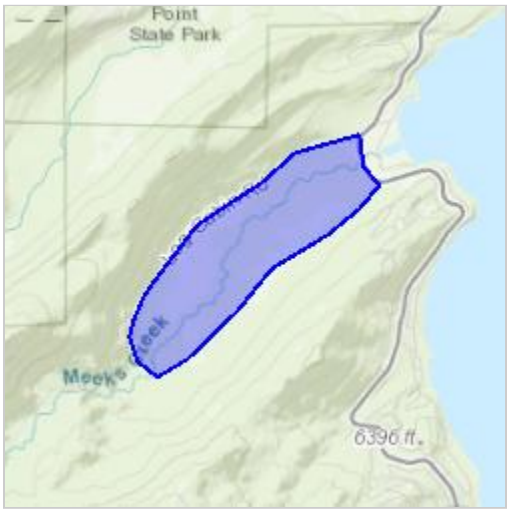
Project Name: Mayala Wata Restoration Project at Meeks Meadow

Project Type: LAND - RESTORATION / ENHANCEMENT

Project Description: Restoration of up to 300 acres of TRPA SEZ within the Meek Meadow complex will be accomplished through the thinning of encroaching conifers in upland areas and removal of encroaching conifers in SEZ. Conifer thinning and removal will be followed by the application of prescribed fire (i.e., broadcast burning) and the long term cultural management of the project area by the Washoe Tribe of California and Nevada.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.02905182872525N120.13751611671117W



Counties: El Dorado, CA

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

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

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

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

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

Mammals

NAME	STATUS
North American Wolverine *Gulo gulo luscus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Proposed Threatened

Amphibians

NAME	STATUS
Sierra Nevada Yellow-legged Frog *Rana sierrae* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered

Fishes

NAME	STATUS
Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/233/office/14320.pdf	Threatened

Critical habitats

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

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

REFUGE INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
California Spotted Owl *Strix occidentalis occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7266	Breeds Mar 10 to Jun 15

NAME	BREEDING SEASON
Cassin's Finch *Carpodacus cassinii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Rufous Hummingbird *selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Williamson's Sapsucker *Sphyrapicus thyroideus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8832	Breeds May 1 to Jul 31
Willow Flycatcher *Empidonax traillii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

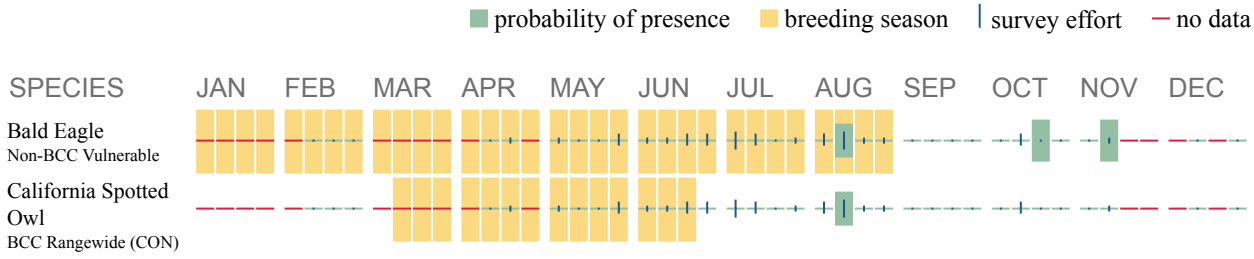
1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

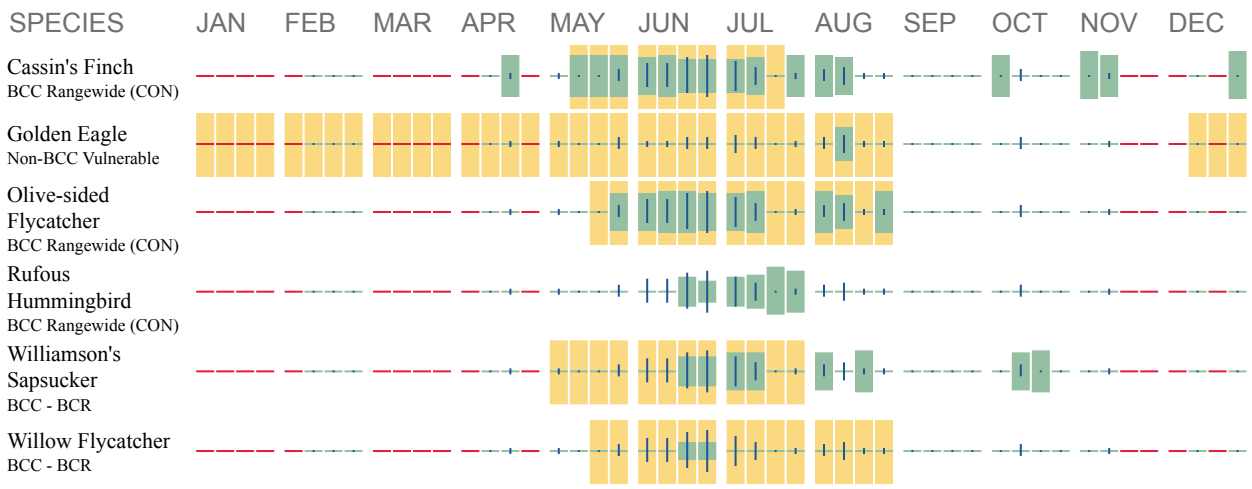
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.
Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1C
- PEM1F

FRESHWATER FORESTED/SHRUB WETLAND

- PFOA
- PSSA
- PSSC

RIVERINE

- R5UBF
- R2UBHx
- R3UBH

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: State Listing Status IS (Endangered OR Threatened OR Rare OR Candidate Endangered OR Candidate Threatened)
 AND County IS (El Dorado)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Calystegia stebbinsii Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1
Ceanothus roderickii Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.1
Empidonax traillii willow flycatcher	ABPAE33040	None	Endangered	G5	S1S2	
Fremontodendron decumbens Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
Galium californicum ssp. sierrae El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
Gulo gulo California wolverine	AMAJF03010	Proposed Threatened	Threatened	G4	S1	FP
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Packera layneae Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
Pekania pennanti fisher - West Coast DPS	AMAJF01021	None	Threatened	G5T2T3Q	S2S3	SSC
Rana boylii foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
Rana sierrae Sierra Nevada yellow-legged frog	AAABH01340	Endangered	Threatened	G1	S1	WL
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Rorippa subumbellata Tahoe yellow cress	PDBRA270M0	None	Endangered	G1	S1	1B.1
Strix nebulosa great gray owl	ABNSB12040	None	Endangered	G5	S1	
Vulpes vulpes necator Sierra Nevada red fox	AMAJA03012	Candidate	Threatened	G5T1T2	S1	

Record Count: 17

Mayala Wata Restoration Project at
Meeks Meadow
Initial Study/Negative Declaration

APPENDIX E

CULTURAL RESOURCES CONSULTATION DOCUMENTS

USDA United States Department of Agriculture | Forest Service | Lake Tahoe Basin Management Unit | 35 College Drive South Lake Tahoe, CA 96150 530-543-2600

File Code: 2360
Date: July 1, 2009
Route to: Stephanie Heller

Subject: Meeks Bay Meadow Restoration Project R2009051900011

From: John Maher

I have reviewed the proposed **: Meeks Bay Meadow Restoration Project R2009051900011.** The project consists restoring the meadow at Meeks Bay through vegetation management. This area has been previously surveyed for historic resources and fall under PA stipulation 7.4 (b).

The proposed project area has been previously surveyed for Historic Properties with the results discussed in the following reports (see attached scoping list). Also included in the scoping report is a list of resources that will be subject to the approved Standard protection measures included below.

The proposed undertaking may be implemented without any further section 106 consultation or review in accordance with the provisions in *the First Amended Programmatic Agreement among the U.S.D.A. Forest Service, Pacific Southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation – Regarding the Processes for Compliance with Section 106 of The National Historic Preservation Act for Management of Historic Properties by the National Forests of the Pacific Southwest Region.*

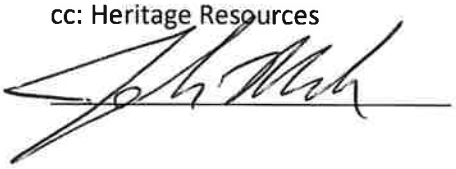
Standard Resource Protection Measures:

- 1.1 Proposed undertakings shall avoid historic properties. Avoidance means that no activities associated with undertakings that may affect historic properties, unless specifically identified in this PA, shall occur within historic property boundaries including any defined buffer zones.
- 1.3 All historic properties within APEs shall be clearly delineated prior to implementing any associated activities that have the potential to affect historic properties. (1) Historic property boundaries shall be delineated with coded flagging and/or other effective marking. (2) Jistoric property location and boundary marking information shall be conveyed to appropriate Forest Service adminstrtors or employees responsible for project implementation so that pertinent information can be incorporated into planning and implementation documents, contracts, and permits.
- 1.5 Monitoring by heritage program specialists may be used to enhance the effectiveness of protection measures. The results of any monitoring inspections shall be documented in cultural resources reports and the Infra database.

If the scope or design of the proposed project is altered or changed, additional review by the Heritage Resources Program will be required. Furthermore, if any previously unrecorded cultural resources are discovered during this project, all project related activities must cease immediately and the consultation process as outlined in section 800.13 of the Advisory Council on Historic Preservation's regulations 36 CFR 800 must be initiated.

Please keep a copy of this letter in the project's planning implementation files. If you have any questions, please contact John Maher at (530) 543-2671.

cc: Heritage Resources



/John Maher 7/1/2009

Project Scoping

Search Distance from Project Boundary: 0 miles

Project Details

Name: MEEKS BAY MEADOW RESTORATION PROJECT **Number:** R2009051900011

Purposes: Watershed **Start Date:** 10/01/2008

Description:

RESTORATION OF MEEKS BAY MEADOW

Prior Tasks within or adjacent to Project

Task Name	Project Number	Project Name	DOE	Reporting Year	Acres Previously Covered	Survey Intensity
MEEKS BAY CUTTING AREA	R1979051900012	MEEKS BAY CUTTING AREA	No Adverse Effect		61.311	0-15 meters
MEEKS BAY CUTTING AREA	R1979051900012	MEEKS BAY CUTTING AREA	No Adverse Effect		5.455	16-30 meters
MEEK'S BAY CUTTING AREA #2	R1979051900020	MEEK'S BAY CUTTING AREA #2	No Adverse Effect		38.648	0-15 meters
WATERLOO TIMBER SALE ADDENDUM	R1985051900002	WATERLOO TIMBER SALE ADDENDUM	No Adverse Effect		4.073	0-15 meters
CAMP WASIU TIMBER SALE	R1989051900001	CAMP WASIU TIMBER SALE	No Adverse Effect		82.213	16-30 meters
CAMP WASIU TIMBER SALE 2	R1989051900002	CAMP WASIU TIMBER SALE 2	No Adverse Effect		101.305	31-50 meters
QUAIL VEGETATION AND FUELS TREATMENT PROJECT	R2004051900087	QUAIL VEGETATION AND FUELS TREATMENT PROJECT	No Adverse Effect		92.003	16-30 meters
MEADOW RESTORATION TEST PROJECT, 8 MEADOWS, CA & NV	R2008051900071	MEADOW RESTORATION TEST PROJECT, 8 MEADOWS, CA & NV	No Adverse Effect		0.674	16-30 meters
SECTION 110 MONITORING CA	R2011051900082	SECTION 110 MONITORING CA			76.968	16-30 meters
Survey	R2018051900059	Page Meadows Survey	No Historic Property Affected		18.695	16-30 meters

Acres Surveyed Within Project: **481.344**

Cultural Resources

Resource ID	Name	Type	MUA / PHA	Desig(s)	Mgmt Categories	Comp Codes
05190000097	BOOT HILL	Site	Not Applicable	National Register - Not Eligible - SHPO Concurs - 06/05/2002	Preservation	Historic
05190000098	FENDER BENDER	Site	Not Applicable	National Register - Not Eligible - SHPO Concurs - 06/05/2002	Preservation	Historic
05190000209	MEEK'S BAY CABINS	Site	Not Applicable		Preservation	Historic
05190000229	CAMP WASIU DUMP 1	Site	Not Applicable	National Register - Not Eligible - SHPO Concurs - 11/29/2001	Preservation	Historic
05190000231	CAMP WASIU DUMP 2	Site	Not Applicable	National Register - Not Eligible - SHPO Concurs - 10/09/2001	Preservation	Historic

Appendix: Descriptions of Cultural Resources

Resource ID: 05190000097 **Smithsonian Number:**

Description:

A sparse Historic can scatter. Direction Description: [redacted]

Resource ID: 05190000098 **Smithsonian Number:**

Description:

A large scatter of historic and non historic trash and rubble including a Ford Model -T fender Direction Description: [redacted]

Resource ID: 05190000209 **Smithsonian Number:**

Description:

Two standing cabins, a collapsed outhouse, a shed and a third possible cabin Direction Description: [redacted]

Resource ID: 05190000229 **Smithsonian Number:**

Description:

A historic trash dump consisting of seven loci spread over 500 feet. Direction Description: [redacted]

Resource ID: 05190000231 **Smithsonian Number:**

Description:

A small trash scatter. Direction Description: [redacted]

MEEKS BAY MEADOW RESTORATION PROJECT

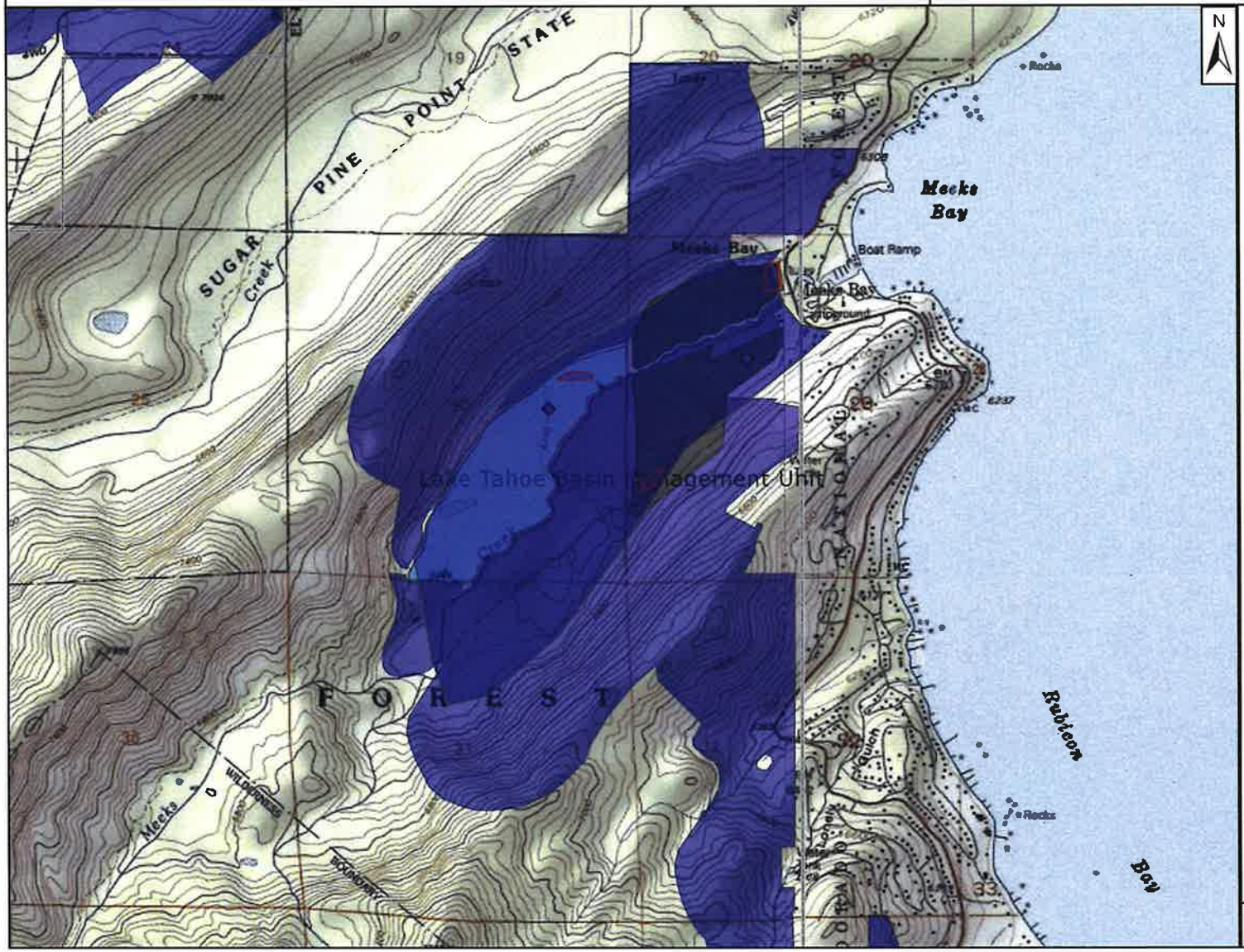
Project Scoping Map

Lake Tahoe Basin Mgt Unit

Map Created Date: Nov 30, 2018 Lead Name: LAKE TAHOE BASIN MGT UNIT

Scale 1:36,112

0 0.175 0.35 0.7 1.05 1.4 1.75 Miles



LEGEND

- Project

Project Resources

- Historic

Project Resources

- Historic

Previous Task Surveys

- Intensive
- Complete
- General
- Projects
- Administrative Forest Boundaries - F
- County or Equivalent
- State or Territory Low-res

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