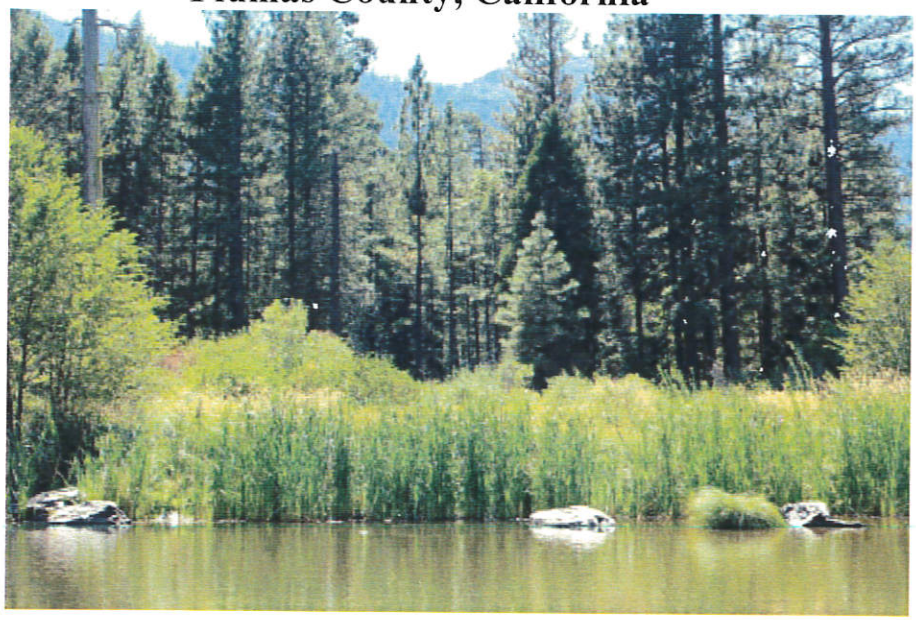
2019029109

California Environmental Quality Act Initial Study for the proposed Genesee Valley Watershed Improvement Project Plumas County, California



Prepared for:

Feather River Resource Conservation District (FRRCD)
The Lead Agency Pursuant to Section 21082.1 of the
California Environmental Quality Act (CEQA)

PO Box 3562

159 Lawrence Street

Quincy, CA 95971

530-283-7513

Prepared by:

Plumas Audubon Society
429 Main Street
Quincy, CA 95971
560-283-9307

January 2019

MITIGATED NEGATIVE DECLARATION

Introduction and Regulatory Context

Stage of CEQA Document Development

☐ **Administrative Draft.** This CEQA document is in preparation by Plumas Audubon Society for Feather River Resource Conservation District (FRRCD) staff.

☒ **Public Document.** This completed CEQA document has been filed by FRRCD at the State Clearinghouse on February 13, 2019 and is being circulated for a 30-day agency and public review period. The public review period ends on March 15, 2019. Instructions for submitting written comments are provided on Pages 5-6 of this document.

☐ **Final CEQA Document.** This Final CEQA document contains the changes made by Plumas Audubon and FRRCD following consideration of comments received during the public and agency review period. The changes are displayed in strike-out text for deletions and underlined text for insertions. The CEQA administrative record supporting this document is on file, and available for review, at the Feather River RCD office at 159 Lawrence Street Quincy, CA 95971.

Introduction

This Initial Study/ Mitigated Negative Declaration (IS/MND) describes the environmental impact analysis conducted for the proposed project. This document was prepared by Plumas Audubon Society and Feather River Resource Conservation District (FRRCD) staff utilizing information gathered from a number of sources including research and field review of the proposed project area and consultation with environmental planners and other experts on staff at other public agencies. Pursuant to Section 21082.1 of the California Environmental Quality Act (CEQA), the Lead Agency, FRRCD, has prepared, reviewed, and analyzed the IS/MND and declares that the statements made in this document reflect FRRCD's independent judgment as Lead Agency pursuant to CEQA. FRRCD further finds that the proposed project, which includes revised activities and mitigation measures designed to minimize environmental impacts, will not result in significant adverse effects on the environment.

Regulatory Guidance

This IS/MND has been prepared by FRRCD to evaluate potential environmental effects which could result following approval and implementation of the proposed project. This document has been prepared in accordance with current CEQA Statutes (Public Resources Code [PRC] §21000 *et seq.*) and current CEQA Guidelines (California Code of Regulations [CCR] §15000 *et seq.*).

An Initial Study (IS) is prepared by a lead agency to determine if a project may have a significant effect on the environment (14 CCR § 15063[a]), and thus, to determine the appropriate environmental document. In accordance with CEQA Guidelines §15070, a "public agency shall prepare … a proposed negative declaration or mitigated negative declaration … when: (a) The Initial Study shows that there is no substantial evidence … that the project may have a significant impact upon the environment, or (b) The Initial Study identifies

potentially significant effects but revisions to the project plans or proposal are agreed to by the applicant and such revisions will reduce potentially significant effects to a less-than-significant level." In this circumstance, the lead agency prepares a written statement describing its reasons for concluding that the proposed project will not have a significant effect on the environment and, therefore, does not require the preparation of an Environmental Impact Report (EIR). This IS/MND conforms to these requirements and to the content requirements of CEQA Guidelines Section 15071.

Purpose of the Initial Study

The purpose of this IS/MND is to present to the public and reviewing agencies the environmental consequences of implementing the proposed project and describe the adjustments made to the project to avoid significant environmental effects or reduce them to a less-than-significant level. This disclosure document is being made available to the public, and reviewing agencies, for review and comment. The IS/MND is being circulated for public and agency review and comment for a review period of 30 days as indicated on the ***Notice of Intent to Adopt a Mitigated Negative Declaration*** (NOI). The 30-day public review period for this project begins on February 13, 2019 and ends on March 15, 2019.

The requirements for providing an NOI are found in CEQA Guidelines §15072. These guidelines require FRRCD to notify the general public by utilizing at least one of the following three procedures:

- Publication in a newspaper of general circulation in the area affected by the proposed project,
- Posting the NOI on and off site in the area where the project is to be located, or
- Direct mailing to the owners and occupants of property contiguous to the project.

FRRCD has elected to utilize notifying publishing the NOI in newspapers of general circulation in the area affected by the proposed project: the Feather River Bulletin, Portola Reported, Indian Valley Record, and Chester Progressive. The NOI was also posted at:

1. The Plumas Audubon Society office at 429 Main Street, Quincy, CA; and

2. The Feather River Resource Conservation District office at 159 Lawrence St. Quincy, CA.

A complete copy of this CEQA document was made available for review by any member of the public requesting to see it at both locations above. An electronic version of the NOI and the CEQA document were made available for review for the entire 30-day review period through their posting on Plumas Audubon Society's and the Feather River Resource Conservation District's Internet Web Pages at: http://www.plumasaudubon.org/ and https://www.frrcd.org/

If submitted prior to the close of public comment, views and comments are welcomed from reviewing agencies or any member of the public on how the proposed project may affect the environment. Written comments must be postmarked or submitted on or prior to the date the public review period will close (as indicated on the NOI) for FRRCD's consideration. Written comments may also be submitted via email (using the email address which appears below) but comments sent via email must also be received on or prior to the close of the 30-day public comment period. Comments should be addressed to:

Brad Graevs, District Manager
Feather River Resource Conservation District
PO Box 3562

Quincy, CA 95971
530-283-7513
featherriverrcd@gmail.com

After comments are received from the public and reviewing agencies, FRRCD will consider those comments and may (1) adopt the Mitigated Negative Declaration and approve the proposed project; (2) undertake additional environmental studies; or (3) abandon the project. If the project is approved and funded, FRRCD could design and complete all or part of the project.

Project Description and Environmental Setting

Project Location

The project area is located between 4 and 11 miles east of Taylorsville, CA and geographically divided into three separate areas: Genesee Woods, Heart K Northwest, and Heart K Southeast. The respective legal location of each of these areas is: Township 25N Range 11 E Sect. 5-8; Township 25 N Range 11 E Sect. 2-3 and Township 26 N Range 11 E Sect. 34-35; Township 25 N Range 11 E Sect. 1, 11-12. USGS 7.5 quads Genesee and Taylorsville. Mount Diablo Base Meridian (MDBM)

Background and Need for the Project

The Genesee Valley Watershed Improvement Project is a collaborative project aimed at reducing the risk of high-severity wildfire as well as taking steps toward restoring watershed and forest health through hand-thinning, hand piling, pile burning and broadcast burning of approximately 839 acres of forested National Forest and adjacent private land. The purpose of the project is to implement hand thinning and a prescribed burn to reduce fuel loading within the project area to the point that fuels would burn at low to moderate severity during future wildfires. This reduction of fuel loads would help to reduce the threat of future wildfires from burning at high severity therefore potentially protecting residents adjacent to the project area, protecting the watershed from degradation, and improving habitat values including late seral forest. Reintroducing fire to the landscape through controlled broadcast burning will also ensure that these areas are protected from high-severity wildfire for longer periods of time post-implementation and creates the opportunity to manage fuel loads with regular fire return intervals into the future. This project is a continuation of a 33,000 acre stewardship strategy which encompasses Genesee and Franks Valleys, the Wheeler Peak Unit of Mud Lake Research Natural Area, and adjacent areas (Plumas Audubon Society 2016).

Project Objectives

1. Mimic natural ecological processes by returning fire to the landscape; promote native plant propagation while reducing fuel loading in the forest understory;
2. Increase watershed health and water yield by removing overstocked, small diameter trees;
3. Control the spread and introduction of invasive plants;
4. Enhance species diversity by increasing the proportion of shade-intolerant and/or fire-adapted conifers including ponderosa pine, sugar pine and black oak;
5. Create surface and ladder fuels conditions such that the potential for crown fire ignition is reduced;
6. Reduce threats to communities and wildlife habitat within and adjacent to the project area from large, severe wildfires and re-introduce fire into fire-adapted ecosystems;

Project Start Date

The project will commence after the necessary environmental review has been completed. The project will be implemented starting November 2019 and continue as weather, air quality conditions, and funding allow.

Project Description

In an effort to achieve the desired objectives forest hand thinning, hand piling, pile burning, and prescribed burning will be utilized. Thinning of small diameter trees under 10 inches DBH, clearing ladder fuels, hand piling, and pile burning will take place mostly in the Genesee Woods project unit (505 acres). These activities will take place on the two Heart K project units as a follow-up to previous thinning and pile-burning. Underburning is planned to be utilized where topographic features and project design allow. No product will be removed under this project. This project may also use either hand pulling and/or intensive grazing of noxious weeds in an effort to control weed populations on the project footprint.

Table 1. Genesee Valley Watershed Improvement Project Prescribed Treatments

Treatment Unit	Acres	Unit Prescription*
Genesee Woods	506	Hand thin, hand pile, underburn
Heart K North West	134	Some followup hand thin and pile, underburn
Heart K South East	199	Some followup hand thin and pile, underburn

* Thinning will remove and pile up to 10" dbh pole size conifers as well as mixed residual fuels. Oaks will be retained.

Environmental Setting of the Project Region

Genesee Valley is situated in the Northern Sierra Nevada approximately 30 miles from where the Sierra Nevada meet the Cascades. Winters are cold and summers are dry and cool. Data collected at Greenville Station CA43621 for the period of 1884-2010, showed average annual precipitation was 44.97 inches with average total snowfall of 52.4 inches. Average annual temperature for this same period was 31.6^0 F (min) and 66.4^0 F (max). Potential evapotranspiration is estimated to be 24 inches per year. Of primary importance is the period of time that is available for biological activity to take place, defined as the growing season (that portion of the year when soil temperature at 20 inches is at biological zero or 41° F). Estimated length of the growing season for the area is less than 60 days, but is more appropriately expressed in terms of frost-free days.

Description of the Local Environment

The project is on south, southeast, southwest, north, northwest, and northeast aspects at an elevation of about 3680 to 5000 feet, with slopes 0 – 100%, with mostly rocky, shallow soil. Alluvial soils occur in the lower elevations of the project area, with slopes of 0-10%. The higher elevations of the project area have slopes ranging from 70-100%. The vegetation type is mixed conifer and montane hardwood, with some montane chaparral, alluvial and riparian areas. The project area contains typical plant species composition of mid-elevation mixed conifer and Black Oak woodland ecosystems for western Plumas County.

Current Land Use and Previous Impacts

The land within the Genesee Valley Watershed Improvement Project area is in various ownerships and land use designations. The vast majority of the forested uplands is public land administered by the Plumas National Forest. The private lands are broken up into various land use scenarios including agricultural preserve (AP),

general agriculture (GA), timber production zones (TPZ) and subdivided properties for residential development such as secondary suburban (S 3-10) and rural (R 10-20). Hand thinning and pile burning occurred on the two Heart K units. Activities on the Heart K SE unit occurred on private lands in 2015 and activities on the Heart K NW unit occurred in 2009-2010. A wild land fire in 2015 changed the condition of the land in the Heart K SE unit. Understory pole sized conifers and hardwoods above road 25N42 had close to 100% mortality while the larger trees are more widely spaced and had a much greater survival rate. This area now has a high density of young shrubs and forbs.

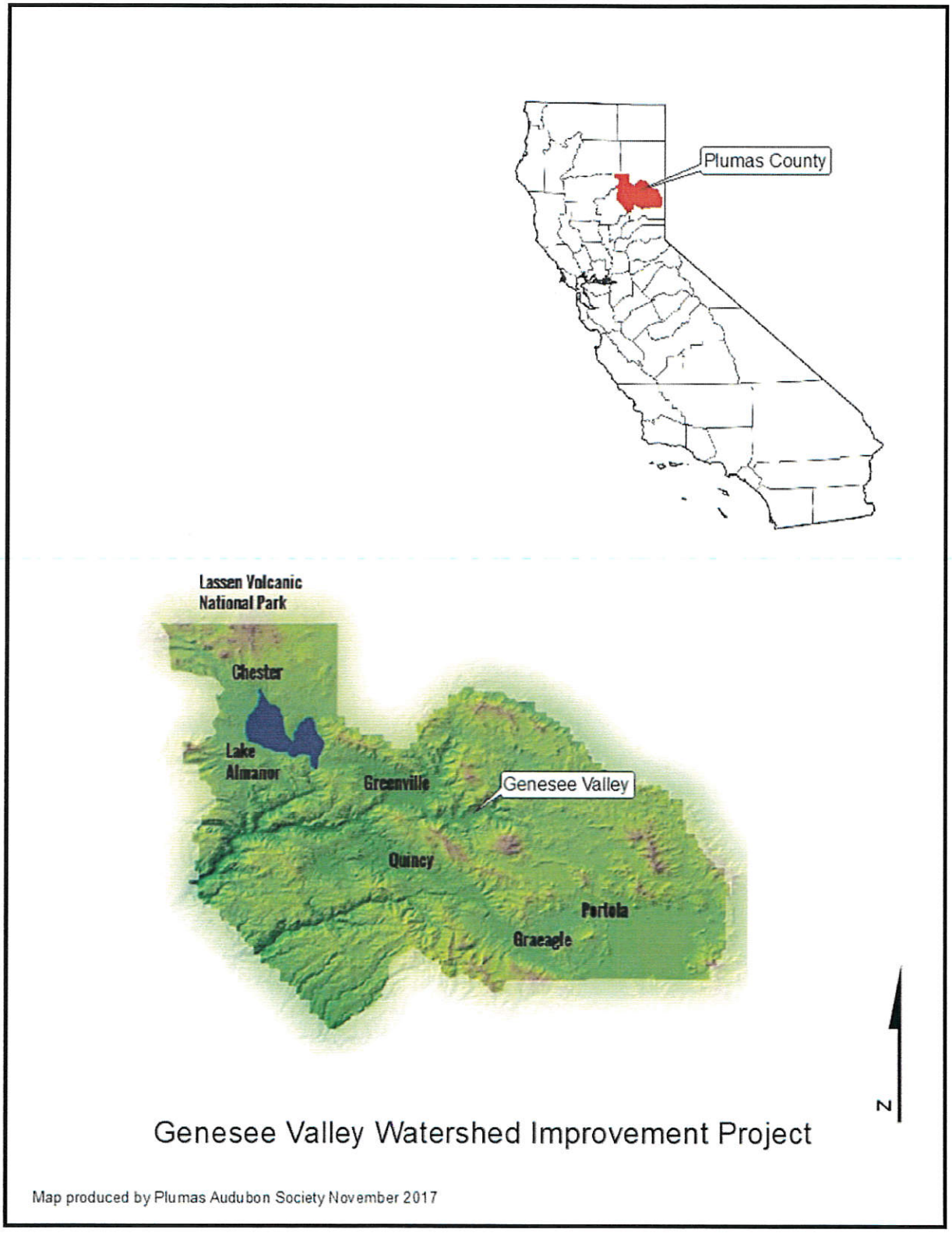


Figure 1: Project Vicinity Map

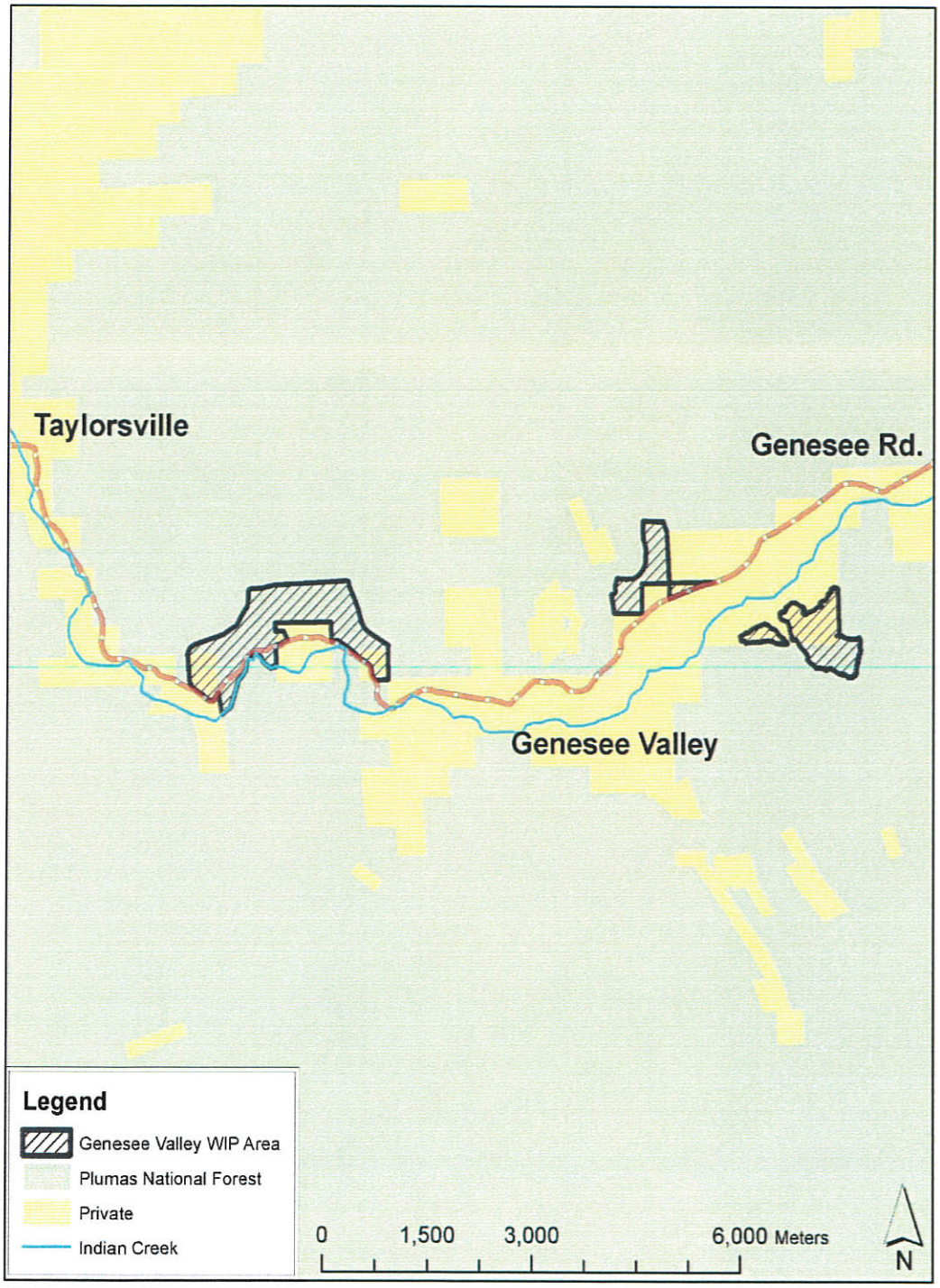
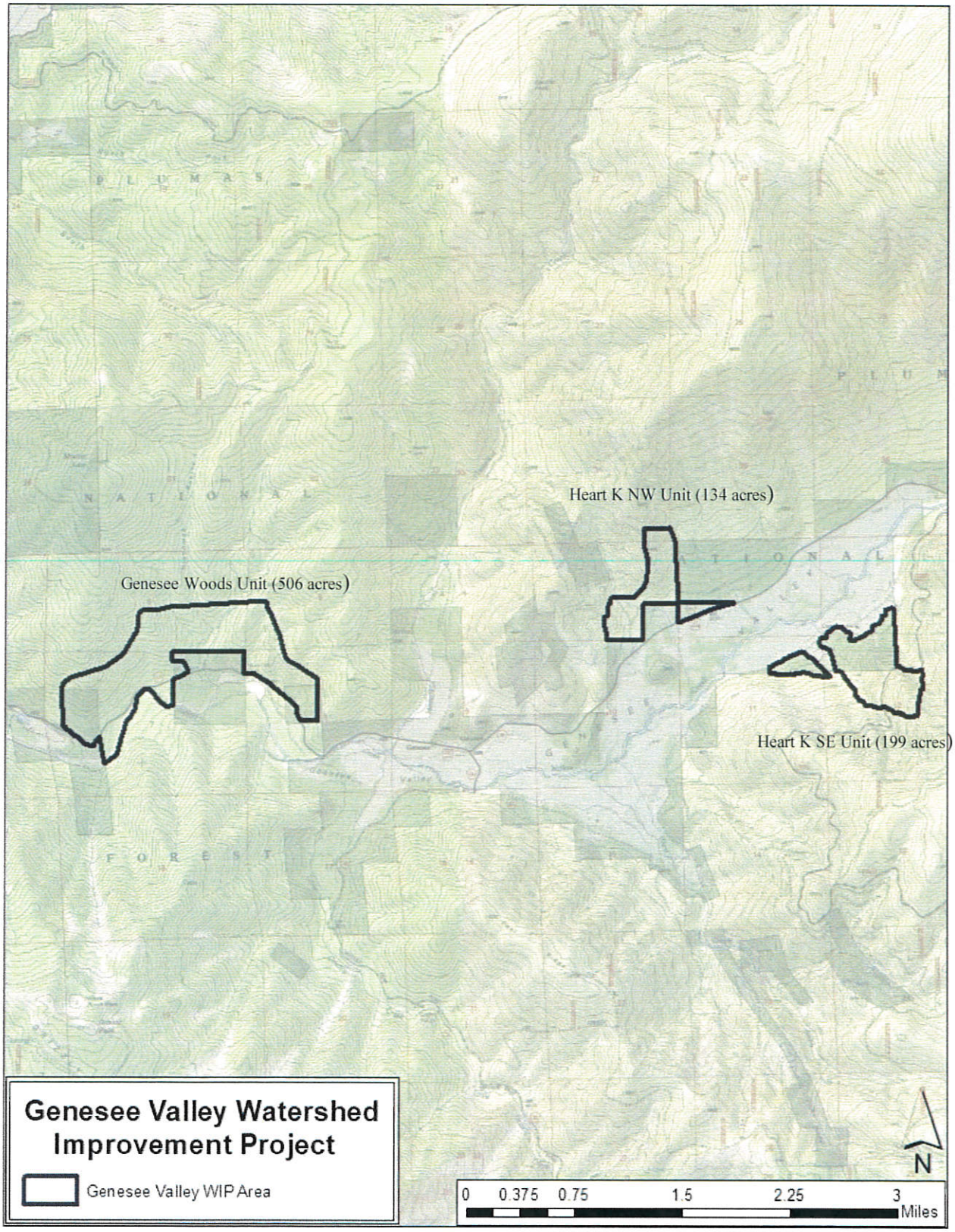


Figure 2: Project Location Map



Map produced by Plumas Audubon Society November 2017

Figure 3: Project Area Topo Map

Conclusion of the Negative Declaration

Environmental Permits

The proposed project may require the following environmental permits may be required to comply with the following State regulations:

Air quality permits and Smoke Management Plans through Northern Sierra Air Quality Management District are expected for proposed burning activities and will be acquired by Plumas Audubon Society or delegated contractors thereof. SE5 burn permits through the California Department of Forestry and Fire Protection may also be required if burning activities occur outside of annual open burn season.

No other permits are anticipated.

Summary of Findings

This IS/MND has been prepared to assess the project's potential effects on the environment and an appraisal of the significance of those effects. Based on this IS/MND, it has been determined that the proposed project will not have any significant effects on the environment after implementation of mitigation measures. This conclusion is supported by the following findings:

1. The proposed project will have no impact related to Hydrology and Water Quality, Land Use Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation and Traffic, and Utilities and Service Systems.

2. The proposed project will have a less than significant impact on Aesthetics, Agriculture and Forestry Resources, Air Quality, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, and Noise.

3. The proposed project will have a less than significant impact with mitigation on Biological Resources, Cultural Resources, and Tribal Cultural Resources.

The Initial Study/Environmental Checklist included in this document discusses the results of resource- specific environmental impact analyses which were conducted by the Plumas Audubon Society for the Feather River Resource Conservation District (FRRCD). This Initial Study revealed that no significant environmental effects are expected to result from the proposed project as mitigation measures are to be adhered to. FRRCD has found, in consideration of the entire record, that there is no substantial evidence that the proposed project, as currently proposed, would result in a significant effect upon the environment. This IS/MND is therefore the appropriate document for CEQA compliance.

PROJECT DESCRIPTION AND BACKGROUND

PROJECT INFORMATION	
Project Title:	Genesee Valley Watershed Improvement Project
Lead Agency Name and Address:	Feather River Resource Conservation District 159 Lawrence Street/PO Box 3562 Quincy, CA 95971
Contact Person and Phone Number:	Brad Graevs, District Manager, 530-283-7513
Project Location:	Genesee Valley, Plumas County
Project Sponsor's Name and Address:	Plumas Audubon Society 429 Main Street Quincy, CA 95971
General Plan Designation:	Secondary Suburban Residential, Timber Resource Land, Agricultural Preserve
Zoning:	S-3, TPZ, GF, AP
Description of Project:	See Pages 6-8 of this document
Surrounding Land Uses and Setting:	Rural residential, ranching, recreation
Other agencies whose approval may be required:	None anticipated
Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?	Tribal consultation for this project has been ongoing, with project designs reflecting the requests of tribal members, some of whom grew up in and around the proposed project area. There are no concerns to date regarding Cultural resources, as Mountain Maidu have been active partners in this collaborative effort.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 3 for additional information.

☐	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	☐	Tribal Cultural Resources	☐	Utilities/Service Systems
☐	Mandatory Findings of Significance	☒	None With Mitigation		

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:** _____

Print: _____

President of the Board of Directors, Feather River Resource Conservation District

CEQA Environmental Checklist

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

I. AESTHETICS

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

Discussion

a) Will the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact: A short-term change in the aesthetics of the project area is anticipated due to blackening of the ground where dead material is consumed and minimal scorching of trees. After one season, the visual effects of prescribed burning will be greatly reduced by vegetation regrowth and leaf litter in the fall. . This is also true for the small diameter forest material that will be piled and burned. The proposed activities will create piles for a short time before they are burned, and after one season the visual effects will be lessened as described above. The areas in and around the project area surrounding Genesee Valley do have public access roads of varying elevation that effectively provide scenic vistas. As the proposed action will have a temporary effect on the aesthetics of the area, the proposed action will also decrease the risk of catastrophic wildfire (USDA 2018a). High-intensity wildfire in the project area's forested landscape has great potential to have a substantial adverse effect, lasting decades, on the scenic views provided in and adjacent to the project area. The reduced risk of high-intensity wildfire provided by the proposed action would increase the long-term beneficial effects to the overall visual and scenic resources.

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

No Impact: The project area is not visible from a state scenic highway.

c) Will the project substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact: The project will not substantially degrade the existing visual character or quality of the site and its surroundings. See discussion a) above.

d) Will the project create a new source of substantial light or glare which will adversely affect day or nighttime views in the area?

Less than Significant Impact: The project will not create a new source of light or glare, other than short durations from the flames of pile burning and prescribed burning activities. The light created by these proposed activities is not likely to be visible to the public as burning generally occurs during the day and is not likely to carry over into the night, the project sites are remote, and the forest within and adjacent to the project area will diffuse most of the light created by the proposed activities.

II. AGRICULTURE AND FOREST RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion

a) 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?

No Impact: The project does not contain any farmland included in the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency and will not convert any farmland.

b) Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact: The proposed project area does contain a small amount of land zoned as Agricultural Production, though the proposed treatments are designed to decrease conifer encroachment on the periphery of this meadow/grazing agricultural area and prevent the conversion of this area to non-agricultural use. The project will not conflict with existing zoning or a Williamson Act contract, therefore there will be no impact.

c) Would the project conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104(g))

No Impact: The project will not conflict with existing zoning or cause any rezoning of forest land or timberland.

d) Would the project result in the loss of forest land or conversion of forest land to non- forest use?

Less than Significant Impact: The project will not result in the loss of forest land or cause conversion of forest land to non- forest use. Hand thinning of small diameter trees will reduce the density of forested stands, resulting in a more balanced range of diameter classes. Prescribed fire is designed and anticipated to be low to moderate intensity and severity, with occasional scorching of larger diameter trees. This scorching is anticipated to mimic natural fire effects and produce snag habitat as well as openings in the canopy that increase the favorability of conditions for shade intolerant conifer species. Reducing stand density and increasing variability in diameter class will exhibit greater vigor and growth as well as increased resiliency to disturbances such as insects, disease and fire. (USDA 2018a). There would be no conflict with areas zoned as forest land or timberland, therefore the impact would be less than significant.

e) 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?

No Impact: The project will not involve any changes in the existing environment which could result in a conversion of allowable uses. See subsection d) above for forest land and subsection b) above for agricultural discussion.

III. AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) 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)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion

a) Will the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant. The project is located in Plumas County, within the Mountain Counties Air Basin, which is regulated by the Northern Sierra Air Quality Management District (NSAQMD). There are no applicable air quality plans to evaluate consistency with, so this analysis relies on whether the project would contribute substantially to an existing air quality violation. Plumas County is designated as nonattainment for particulate matter with an aerodynamic diameter of 10 microns or less (PM10) with respect to the California Ambient Air Quality Standards (CAAQS) (ARB 2015). NSAQMD has mass emissions thresholds for PM10, shown in Table 1, below.

FIRE-RELATED EMISSIONS

Emissions from prescribed fire are fundamentally different from general construction-related emissions and are treated through separate programs by local air districts. Construction emissions are subject to the mass emissions thresholds set forth for construction projects while prescribed fire emissions are managed by the local air districts through burn permits and SMPs. Therefore, this analysis qualitatively evaluates emissions associated with prescribed burning. Prescribed burns and pile burning would emit air quality pollutants such as PM10. However, all burning would be completed under approved smoke management plans and permits to burn, which are required by NSAQMD. These plans and permits would describe acres by burn type, predominant vegetation, duration of burn, emissions estimates, identification of smoke sensitive areas, alternatives and contingencies, and the responsible parties. Emissions would be minimized through considerations such as weather conditions, wind direction, and burn pile size. The local air district is the ultimate arbiter in whether the activity can occur as proposed, in a limited capacity, or must be postponed based on the predicted transport and placement of pollutants from the activity relative to sensitive receptors that may be impacted by the activity. Prescribed fire treatments need not only an authorization from the local air district, but also must ensure that the conditions set forth in the approved smoke management plan are met prior to ignition of a prescribed fire. That is, even with authorization from the local district to conduct the prescribed burn, if the conditions and requirements of the smoke management plan are not met on site, ignition is prohibited (17 CCR Section 80160). Because the project would

be required to meet all NSAQMD air quality requirements, which include measures to reduce PM10 emissions to the degree feasible. Therefore, the fire-related emissions would not violate air quality standards or conflict with or obstruct implementation of air quality attainment plans. This impact would be less than significant.

NON-FIRE-RELATED EMISSIONS

Sources of non-fire-related PM10 emissions include vehicles and equipment associated with hand thinning, pile burning, and prescribed fire.

The project would result in temporary emissions of PM10 from project-related truck and engine trips, and worker commute trips during hand thinning, pile burning, and prescribed fire. These emissions have been modeled and are evaluated relative to the air district mass emissions thresholds, shown in Table1. NSAQMD has developed a tiered approach to significance levels; a project with emissions meeting Level A thresholds would require the most basic emissions reduction requirements.

Table 1. NSAQMD Air Pollution Mass Emissions Thresholds

NSAQMD Threshold Level	PM10 (lb/day)
Level A	<79
Level B	79-136
Level C	>136

Notes: PM10 = respirable particulate matter; lb/day = pounds per day; because Plumas County is in attainment for ozone precursors, related emissions thresholds are not reported. Source: NSAQMD 2007

The Vegetation Treatment Program Environmental Impact Report (PEIR) prepared by the California Board of Forestry and Fire Protection for a statewide program provides typical air quality pollutant emission estimates for hand thinning and prescribed fire (Board of Forestry 2017). While these do not reflect exact emissions for the project, these air quality pollutant emissions estimates can be scaled-down to provide a reasonable estimate of emissions from treatment activities associated with the project. It is assumed that prescribed fire would occur over the 839 acres, though the actual area that is feasible for prescribed fire is expected to be less. Pile burning would occur over lands that have been thinned.

Table 2. Non-Fire Related Air Pollutant Emissions

Activity	PM10 (lb/day)
Hand Thinning	0.228
Prescribed Fire for Tree Dominated Area	0.95
Total	1.178
NSAQMD Threshold	<79

Table 2 summarizes the maximum daily non-fire related PM10 emissions, conservatively assuming all activities occur concurrently. Refer to Appendix B for a detailed description of all calculations and assumptions.

As shown in Table 2, maximum daily project emissions would reach 1.18 lb/day of PM10, which is well below NSAQMD's air pollutant emissions significance threshold of 79 lb/day.

Over the long-term, thinning of the forest fuels in the project area would reduce the likelihood of a large- scale wildfire, which would improve regional air quality by reducing potential emissions of associated criteria air pollutants and precursors. Considering this, and that project emissions would be below the applicable thresholds, impacts would be less than significant.

b) Will the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact: The project area is within the Northern Sierra Air Quality Management District. A smoke management plan will be submitted prior to conducting prescribed burns. Burning will only occur on designated burn days and within the approved prescription. Burns will be conducted in small units which will minimize smoke impacts. These measures will ensure that smoke generated from the project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

c) Will 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)?

Less than Significant Impact: Past, present, and future development projects contribute to adverse air quality on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. Emissions from individual projects contribute to existing cumulatively significant adverse air quality impacts. Several air districts recommend using their mass emissions thresholds for evaluating whether construction-generated emissions of PM10 would be cumulatively considerable; that same approach has been adopted here.

As described under a) above, Plumas County is designated as nonattainment for PM10. As shown in Table 2, project emissions of PM10 would be 1.18 lb/day, which is well below the mass emissions threshold of 79 lb/day. Therefore, the project would not contribute a cumulatively considerable increase of those criteria pollutants; this impact is less than significant.

d) Will the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact: Sensitive receptors near the project area include: recreational users, residents, and private land owners. However, as described above under a) and c), would not exceed significance thresholds and would not obstruct implementation of the applicable air quality plan. Furthermore, emissions-generating project activities would be temporary and dispersed throughout the project area, limiting the potential for substantial emissions to be in any one location for an extended period. As described in discussion a) above, prescribed burning would be implemented in accordance with a smoke management plan approved by NSAQMD. The smoke plan requires burning with wind directions that transport smoke away from communities and limiting the acres burned daily. Burns would be conducted during approved burn days when atmospheric conditions favor smoke dispersion. This would minimize the temporary impacts of smoke. Therefore, this impact would be less than significant.

e) Will the project create objectionable odors affecting a substantial number of people?

Less than Significant Impact: Equipment used in project activities and smoke from burn piles could result in temporary odors. As described in discussion a) and d) above, prescribed burning would be implemented in accordance with a smoke management plan approved by NSAQMD. The smoke plan requires burning with wind directions that transport smoke away from communities and limiting the acres burned daily. Burns would be conducted during approved burn days when atmospheric conditions favor smoke dispersion. This would minimize the temporary impacts of smoke. In the long term, the project does not include new odor sources. The project would result in a less-than-significant impact.

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☒	☐	☐
c) 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?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion

a) *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 Wildlife or the U.S. Fish and Wildlife Service?*

Less Than Significant Impact with Mitigation: Multiple special-status animal and a special-status plant species are known to occur within the project area. The National Environmental Protection Act Categorical Exemption (USDA 2018a) approved for the project incorporated best management practices, resource protection measures, and mitigation measures listed in Appendix A to avoid any potential impact to these species.

Special Status Plants

Candidate, sensitive, and special status plants that have potential to occur on or adjacent to the project area were surveyed for following the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2009) and USFS protocol (USDA 2018c). The surveys were floristic and focused on habitat that candidate, sensitive, and special status species were most likely to occur. One occurrence of *Cypripedium montanum* (mountain lady's-slipper) was discovered and has a California Native Plant Society (CNPS) state threat ranking of 4.2 (Limited distribution, moderately threatened in California) and a global ranking of G4 (apparently secure). The following mitigation measure will protect this occurrence from significant adverse impact.

Mitigation Measure 1 - Sensitive Plant Protection.

The *Cypripedium montanum* occurrence on the Heart K SE unit will be avoided in order to protect this occurrence and its habitat. No project activities will take place within 25 ft. of the occurrence (thinning, piling, pile burning, hand-line construction, or broadcast burning), and tress that could potentially land on or near the occurrence will be felled directionally away from the occurrence. For location of occurrence and more information on survey results see Appendix A and Genesee Valley WIP Botany Reports (USDA 2018c). If any other TESP plant species is incidentally discovered a professional botanist will be consulted on how to protect the discovered occurrence.

Special Status Wildlife

Candidate, sensitive, and special status wildlife species were evaluated on their likelihood of occurring or having habitat on or adjacent to the project area, and if that habitat would be affected by the project (Table 3).

All species listed as a Category 1 Designation in Table 3 were determined to not have suitable habitat within or adjacent to the project area and would not be significantly adversely impacted by the project activities, therefore were not included in any further analysis. Surveys were conducted for Sierra Nevada and oothill Yellow-legged frogs, Western Pond Turtle, California Spotted Owls, Northern Goshawks, Greater Sandhill Cranes and listed or sensitive carnivore species.

Aquatic Species

Potentially suitable habitat for Foothill Yellow-legged frog *(Rana boylii)*, Sierra Nevada Yellow-legged Frog (*Rana sierrae*), and Western Pond Turtle (*Emys marmorata)* occurring within or less than ½ mile downstream of project activity was surveyed to protocol (Fellers and Freel, 1995) a minimum of 2 times during the 2017 season. Indian creek could not be effectively surveyed due to thick vegetation preventing access from shore and high water level and flow preventing surveyors the ability to safely survey from the creek. No Sierra Nevada yellow-legged frogs or Foothill yellow-legged frogs were detected within or adjacent to the project area. A third survey visit to all of the suitable habitat and attempt to survey Indian Creek will occur in 2018 for these amphibious species. Hardhead minnow (*Mylopharodon conocephalus*) has been detected in Indian Creek in the past, and is assumed to be occupying that waterway presently. Though no candidate, sensitive, or special status species were found, the following mitigation measure will be used to minimize the potential of negatively affecting any of the above mentioned aquatic species or their habitat. These mitigation measures were designed for Sierra Nevada Yellow-legged Frogs, though they will provide protection for the same overlapping habitat for all aquatic species above.

Table 3. Special Status Wildlife Species that Potentially Occur On and Adjacent to the Plumas National Forest Threatened, Endangered and Sensitive Wildlife Species (Scientific Name)	Species Status*	Habitat or Ecosystem Component	Category for Project Analysis**	Designation
Invertebrates				
Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)	FT	Elderberry trees (*Sambucus* spp.)	1	WNA / NI
Western Bumble Bee (*Bombus occidentalis*)	USFS : S	Access to Flowering Plants and Abandoned Rodent Burrows	2	WNA / NI
Fish				
Hardhead Minnow (*Mylopharodon conocephalus*)	USFS : S, DFW : SSC	Riverine and Lacustrine	2	MAINLA / LSTI
Amphibians				
California Red-legged Frog (*Rana aurora draytonii*)	FT	Riverine and Lacustrine	1	WNA / NI
Foothill Yellow-legged Frog (*Rana boylii*)	USFS : S, DFW : SSC	Riverine and Lacustrine	2	WNA / LTSWM
Sierra Nevada Yellow-legged Frog (*Rana sierrae*)	FE	Riverine and Lacustrine	2	WNA / LTSWM
Reptiles				
Western Pond Turtle (*Actinemys marmorata*)	USFS : S, DFW : SSC	Riverine and Lacustrine	2	WNA / LTSI
Birds				
Bald Eagle (*Haliaeetus leucocephalus*)	USFS : S,SE, USFWS : BCC	Large trees adjacent to riverine and lacustrine	2	WNA / NI
California Spotted Owl (*Strix occidentalis occidentalis*)	USFS : S, USFS : MIS, DFW : SSC, USFWS : BCC	Late Seral Closed Canopy Coniferous Forest	3	MAINLA / LTSWM
Greater Sandhill Crane (*Grus canadensis tabida*)	USFS : S, ST	Open habitats (grasslands and croplands), shallow lakes, fresh emergent wetlands	2	WNA / NI
Great Gray Owl (*Strix nebulosa*)	USFS : S, SE	Late Seral Closed Canopy Coniferous Forest adjacent to wet meadows	1	WNA / NI
Northern Goshawk (*Accipiter gentilis*)	USFS : S, DFW : SSC	Late Seral Closed Canopy Coniferous Forest	3	MAINLA / LTSWM
Willow Flycatcher (*Empidonax traillii brewsteri*)	USFS : S, SE, USFWS : BCC	Riparian with Dense Willows	1	WNA / NI
Yellow-billed Cuckoo (*Coccyzus americanus*)	FT	Large patches of riparian vegetation along low gradient open river valleys	1	WNA / NI
Mammals				
American Marten (*Martes americana*)	USFS : S	Late Seral Closed Canopy Coniferous Forest	2	WNA / NI
California Wolverine (*Gulo gulo luteus*)	FP, USFS : S, ST	Late Seral Closed Canopy Coniferous Forest	1	WNA / NI
Pacific Fisher (*Martes pennanti pacifica*)	FC, USFS : S, DFW : SSC	Late Seral Closed Canopy Coniferous Forest	2	WNA / NI

Gray Wolf (*Canis lupus*)	FE	Generalist: Forest, Grassland, Tundra, Desert	2	WNA / NI
Pallid Bat (*Antrozous pallidus*)	USFS : S, DFW : SSC	Open, Dry Habitats with Rocky Area	3	MAI / LTSI
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	USFS : S, DFW : SSC	Mesic Habitats	3	MAI / LTSI
Fringed Myotis (*Myotis thysanodes*)	USFS : S	Hardwood-conifer Open Canopy Forest	3	MAI / LTSI

*Species Status: **FE** = Federal Endangered, FT = Federal Threatened, **FP** = Federal Proposed, **FC** = Federal Candidate,
USFS : S = U.S. Forest Service - Sensitive, **USFS : MIS** = U.S. Forest Service – Management Indicator Species, **SE** = State Endangered,
ST = State Threatened, **DFW : FP** = State Fully Protected, **DFW : SSC** = State Species of Special Concern,
USFWS : BCC = U. S. Fish and Wildlife Service Birds of Conservation Concern, **SOI** = Species of Interest.
** **Category 1:** Species whose habitat is not in or adjacent to the wildlife analysis area and would not be affected/ impacted by the project.
Category 2: Species whose habitat is in or adjacent to the wildlife analysis area, but would not be either directly or indirectly affected/impacted by the project.
Category 3: Species whose habitat would be either directly or indirectly affected/impacted by the project.
***NEPA Determinations: T, E & P Species: WNA** = Will Not Affect, **MAINLA** = May Affect but Is Not Likely to Adversely Affect Individuals or their designated critical habitat, **MAILAA** = May Affect and Is Likely to Adversely Affect Individuals or their designated critical habitat.
FS Sensitive Species: WNA = Will Not Affect, **MAI** = May Affect Individuals, but is not likely to result in a trend toward Federal listing or loss of viability, **MAILRTFL** = May Affect Individuals, and is Likely to Result in a Trend toward Federal Listing or loss of viability.
CEQA Determinations: NI = No Impact, **LTSI** = Less Than Significant Impact, **LTSWM** = Less than Significant Impact with Mitigation, **PSI** = Potentially Significant Impact

Mitigation Measure 2 – Yellow-Legged Frog and other Aquatic Species Protections.

The following measures are designed to protect Yellow-legged frogs and other aquatic TESP species from any incidental take or degradation of habitat as a result of project activities. For locations of streams, buffer zones and more information on survey results see Appendix A and Genesee Valley WIP wildlife report (USDA 2018b).

- Chainsaw thinning allowed within the inner Riparian Conservation Area, but no piling of material within 82 feet of perennial streams over 4500 feet elevation (to prevent risk of burning frogs that choose to hibernate in piles).
- No piling within 25 feet of perennial or intermittent streams at all elevations.
- Chainsaw thinning over 4500 feet elevation would be restricted to summer season when frogs are in streams, and not in uplands See Table 4 in Mitigation Measure 3.
- No prescribed fire ignited within 25 feet of streams over 4500 feet elevation.
- New or existing water draft sites would be evaluated with the Mt. Hough Ranger District Biologist prior to changes or use. Drafting sites shall be visually surveyed for amphibians and their eggs before drafting begins. Forest personnel and contractors shall use the Forest Service approved suction strainer (FSM 5161) and/or CAL FIRE approved strainer or other foot vales with screens having openings less than 2mm in size at the end of drafting hoses. The suction strainer shall be inserted close to the substrate in the deepest water available; the suction strainer shall be placed on a shovel, over plastic sheeting, or in a canvas bucket to avoid uptake of substrate or aquatic biota.

Adhering to all Best Management Practices, Standard Operating Procedures, and the above minimum distances will prevent sediment from reaching streams as a result of all project activities.

Bald Eagle

The potential suitable nesting habitat was visite a minimum of 6 times with only one Bald Eagle (*Haliaeetus leucocephalus*) observed flying over approximately one mile away from the project area and , with no Bald Eagle observations on or immediately adjacent to the project area no specific Bald Eagle nesting surveys were completed. The small amount of suitable Bald Eagle nesting habitat occurring on and adjacent to the project area was visited regularly for other avian surveys and is if an Eagle were nesting near the project area surveyors would have detected an Eagle during these avian wildlife surveys and reported on observations as directed.

California Spotted Owl, Northern Goshawk, and Sensitive Carnivore Species

Approximately 86 acres of suitable habitat and 409 acres of potentially suitable habitat for California Spotted Owls (*Strix occidentalis*), Northern Goshawks (*Accipiter gentialis*), and sensitive carnivore species [American marten (*Martes americana*), California wolverine (*Gulo gulo luteus*), and Pacific fisher (*Martes pennanti pacifica*)] exist within the project area. Protocol based surveys were conducted for these species, protocols being: Spotted Owl (USDA 1993), Northern Goshawk (USDA 2000), and forest sensitive carnivores (Zielinski and Kucera 1995). No sensitive carnivore species were detected during surveys. Both avian species surveyed for were found both on and adjacent to the project area. Spotted Owls and Goshawk pairs were found approximately ½ mile away from the Genesee Woods project unit. The Spotted Owls in this area were successful in reproducing one offspring during the 2017 breeding season (with no nest found). The Goshawks in this area were paired and though no nest or offspring were found, are assumed to be a breeding pair. Neither of the species in this area adjacent to the Genesee Woods project unit will be negatively affected by the project activities. Both species were also found to successfully reproduce one offspring adjacent to the Heart K SE project unit. The Spotted Owl nest was found approximately 100m from the project area, which produced one offspring in 2017. No Goshawk nest was found, though a juvenile Goshawk was detected within 15m of the project area, and adult Goshawks were detected in the project area. Surveys for both species will be conducted prior to project implementation to determine nesting status and nest location in order to inform Limited Operating Periods (LOPs) that will be in place to protect these pairs. The following mitigation measure will prevent adverse effect to the species listed in Table 2, including the above listed avian pairs on and adjacent to the project area.

Bats

Limited direct impacts of hand thinning would be expected due to the general lack of suitable habitat provided by small diameter trees. Disturbance associated with human presence and noise disturbance associated with chainsaw use would occur, potentially significant enough to cause temporary or permanent roost abandonment resulting in lowered reproductive success. These effects would be most severe during the breeding season (May 1 to August 15) when the potential exists for disturbance to active breeding females and maternity colonies. Due to the small size of bats, and the difficulty of surveying for them, it is hard to determine where they are roosting. However, if a roosting site is discovered prior to or during projects activities a limited operating period would be applied (Table 2).

Prescribed burns would consume logs and snags the analysis area that provide potential roost sites. However, these same acres would likely recruit both snags and downed logs through the prescribed burning process, so effects are expected to be negligible. The prey base for bats (insects) may have some site-specific short-term reductions post underburning due to direct mortality of eggs, larvae, pupae and adults from fire. However, post-fire conditions have been shown, in many instances, to increase plant vigor (Lyon and Stickney 1976, DeByle 1984, Stein et al. 1992), and it has also been shown that many herbivorous insects preferentially feed on and have increased reproductive success and fitness on more vigorous plants and plant parts (Price 1991, Spiegel and Price 1996). Therefore, post fire conditions may increase the forage base available to bats. The proposed action may affect individual Pallid bats, Townsend's big-eared bats, and Fringed myotis bats, but overall is expected to have negligible effects to these species.

Mitigation Measure 3 – Limited Operating Periods. Limited Operating Periods will be adhered to where operations will be "limited" as described in Table 4.

Table 4. Limited Operating Periods for TES species.

Table of Limited Operating Periods (LOPs) for the Genesee Valley Watershed Improvement Project		
Species	**Location**	**Limited Operating Period**
Yellow-legged Frogs	Instream work	Dry Stream Channel or pre-project survey
	Upland work and burning	October 01 – April 15
California Spotted Owl	Within 1/4 mile of nests or within protected activity center boundary	March 1 - August 15
Goshawk	Within 1/4 mile of nests or within protected activity center boundary	February 15 - September 15
Pallid Bat and Townsend's Big-eared Bat	W/In 1/4 mile of maternity and other roosts	May 1 – August 15

Discussion

Due to the light nature of the proposed project activities, and the incorporated Mitigation Measures, it is not expected that any candidate, sensitive, or special status species would be significantly impacted by this project. Alterations to the understory will occur by removing many of the small trees and downed wood, but a certain amount of these understory components will remain as well as regenerate. Such attributes are important for wildlife species and can provide for needs such as forage and cover. It is also reasonable to expect an increase in the quality and quantity of browse availability following project activities. Understory flora could become more diverse as pyrophytic plants currently not common could increase in number, and post-thinning and burning more of the forest floor would be exposed to light creating suitable habitat for a more diverse array of understory species. An overall increase in biodiversity is expected within treated areas as a result of disturbance. Sedimentation of streams will be mitigated, protecting aquatic species from significant adverse impacts. Due to the low intensity of proposed treatments, and mitigation measures incorporated, the project would result in a less than significant impact on special-status species.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?

Less Than Significant Impact with Mitigation: The above Mitigation Measures, Best Management Practices, and Standard Operating Protocols would prevent substantial adverse effect to any riparian habitat or sensitive natural community. Mitigation Measure 2, particularly, is designed to protect and aid in the restoration of riparian habitat. Implementation of the fuels and forest health treatments would result in less-than-significant impacts on riparian habitat or other sensitive natural communities. Furthermore, it is anticipated that reduction of severe wildfire risk would be beneficial to sensitive habitats. Therefore, this impact would be less than significant.

c) 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?

No Impact: There are no federally protected wetlands in the project area. The project will not cause any changes in hydrology which could impact wetlands outside the project area.

d) 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?

No Impact: The project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species, will not interfere with any wildlife corridors, and will not impede the use of native wildlife nursery sites. The project includes hand thinning, pile burning, and prescribed fire. These treatments would not result in a conversion of forested to non-forested land, or otherwise result in conditions that would impede the local or regional movements of wildlife or impede the use of native wildlife nursery sites. Therefore, the project would not substantially interfere with the use of nursery sites or the movement of migratory birds or other wildlife species. The impact would be less than significant.

e) ***Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

No Impact: The project will not conflict with any local policies or ordinances protecting biological resources, including tree preservation policies or ordinances. The 1984 Plumas County General Plan (and 2013 General Plan Update) contains directives to identify important wildlife habitats, important wildlife migration routes, and significant wetlands. As discussed in a) above, the project would not conflict with these policies. This impact would be less than significant.

f) ***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?***

No Impact: The project will not conflict with a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There are no proposed or approved habitat conservation plans or natural community conservation plans in Plumas County. There would be no impact.

V. CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

Thresholds of Significance: The project would have a significant effect on Cultural Resources if it would cause a substantial adverse change in the significance of a historical resource as defined in '15064.5; cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5; directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or disturb any human remains, including those interred outside of formal cemeteries.

Discussion

The Northeast Information Center (NEIC) of the California Historic Resources Information System (CHRIS) was contacted via a letter on August 4, 2017 by DZC Archaeology & CRM Consulting requesting a file search. The purpose of the file search was to determine if cultural resources surveys were conducted on or adjacent to the project site. Additionally, the Area of Potential Effect (APE) map was provided to the NEIC to determine if there was a level of sensitivity regarding historical and cultural resources. In their response letter dated September 5, 2017 the NEIC writes that there are nineteen cultural resources present within, or immediately adjacent to, the APE, and that fifteen previous cultural resource surveys had been conducted within, or adjacent to, the APE. The State Office of Historic Preservation Historic Property Directory (OHP HPD) (which includes listings of the California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and the National Register of Historic Places) lists no recorded buildings or structures within or adjacent to the APE. In addition to these inventories, the NEIC base maps show no recorded buildings or structures within the APE. Similar studies were conducted at the Plumas County Museum and the Plumas National Forest, Mt. Hough District, both of which confirmed the presence of these resources.

The Native American Heritage Commission (NAHC) was contacted on August 4, 2017, requesting a Sacred Lands File Search. The NAHC responded that the area was negative for SLFs on file. Both the NAHC and the NEIC recommended contacting the local Native American representatives as there is a high potential for Traditional Cultural Properties with the APE.

Based on the recommendation of the NEIC and the NAHC, a project notification and request for comment were sent to the Tribal Historic Preservation Officers from the Greenville Rancheria, Mooretown Rancheria of Maidu Indians, the Susanville Indian Rancheria, the Washoe Tribe of Nevada and California, and the Tsi Akim Maidu. A representatives of the Mountain Maidu Consortium, and a direct descendant of the Native American family directly affiliated with the APE, responded that they would be in agreeance to the application of standard protection measures (for cultural resources) as outlined in the Programmatic Agreement among the U.S.D.A Forest Service, Pacific Southwest Region, California State historic Preservation Officer, and Advisory Council on Historic Preservation (R5PA).

A cultural resource survey and inventory was undertaken during September 2017. The work was overseen by a Secretary of the Interior qualified Registered Professional Archaeologist and a team of professional archaeologists. The survey team identified both new and previously recorded resources spanning both the pre-contact and historic eras. Site specific mitigations, referred to as Standard Protection Measures (SPMs) were prescribed for each resource based on the presence or absence of at-risk for fire constituents, and the type of cultural constituents present within the site. All SPMs comply with the federal level R5PA.

a) and b) Cause a substantial adverse change in the significance of a historical or archaeological resource?
Less than Significant Impact with Mitigation: According to the Cultural Resources Inventory Report, there are locations within the project area identified as containing cultural resources. These resource should be treated as historically significant, and therefore protected, unless further investigations provide evidence to the contrary (PRC 5024.1, Title 14 CCR, Section 4850 et seq.).

c) Directly or indirectly destroy a unique paleontological resource or unique geologic feature?
Less than Significant Impact with Mitigation: Paleontological resources are the remains or traces of prehistoric animals and plants. Paleontological resources, which include fossil remains and geologic sites with fossil-bearing strata are non-renewable and scarce and are a sensitive resource afforded protection under environmental legislation in California. Under California PRC Section 5097.5, unauthorized disturbance or removal of a fossil locality or remains on public land is a misdemeanor. State law also requires reasonable mitigation of adverse environmental impacts that result from development of public land and affect paleontological resources (CPR Section 30244). Although it is unlikely that project activities would impact potentially significant unique paleontological or geologic resources, it cannot be ruled out altogether.

d) Disturb any human remains, including those interred outside of formal cemeteries?
Less than Significant Impact: One burial site is located within the APE; two cemeteries are located immediately adjacent to the APE. All are marked and highly visible. If human remains are discovered during project activities, impacts could be significant. As such, mitigation standards have been incorporated into this project to reduce this potential impact to less than significant by providing standard procedures in the event that human remains are encountered during project construction and adherence to PRC Section 5097.98 requiring Native American tribal notification.

Supplementary from Tribal Resources Section - Cause a substantial adverse change in the significance of a tribal cultural resource?
Less than Significant Impact: Starting July 1, 2015, Lead Agencies are to consult with Tribes and initiate consultation prior to the release of a negative declaration, mitigated negative declaration or environmental impact report under the California Environmental Quality Act (CEQA). More specifically, AB 52 creates a new category of resources in CEQA called "tribal cultural resources" and seeks to engage the expertise of Native American tribes in the protection and preservation of those resources. To fulfill that purpose, the new law requires the lead agency to consult with a local Native American tribe as part of the environmental review process. The law also requires that the details of the tribal cultural resource be kept confidential and provides examples of mitigation measures that focus on preserving tribal cultural resources. The Cunningham Family, direct Mountain Maidu descendants for the project area, were engaged early in the process and have expressed concern for cultural resources in the APE. In a cooperative dialogue they have disclosed areas of concern, which are now protected by project mitigation measures. If any incidental discoveries are made of potentially culturally significant resource, the tribes will be consulted on said resource.

Mitigation Measure 4 – Protections for Cultural Sites

A detailed index noting which mitigation measures – referred to here as SPMs - are applicable to which resources, is available for review in the specialist report (Zalarvis-Chase 2017).. The following items are the identified SPMs for this project, all of which conform to the SPMs as outlined in the R5PA.

- Site boundaries will be flagged for identification.
- No ground-disturbing activities (e.g. skidding, use of tracked equipment, construction of temporary roads or landings) will be allowed within site boundaries.
- Staging areas will be located well away from archaeological sites.
- No staging of heavy equipment will occur within site boundaries.
- Hand thinning (i.e. loppers, chainsaws) will be allowed within site boundaries, with minimal ground disturbance (i.e. hand bucking, hand carrying) when supervised by a Forest archaeologist.
- If directional felling will be required within site boundaries, a Forest Service archaeologist must be consulted.
- All slash is to be piled away from sites.
- Piling of thinned fuels is prohibited within site boundaries unless piling locations are predetermined by a Forest archaeologist.
- Low-intensity understory burns will be allowed across sites, provided they have no flammable (at-risk) features and a low fuel load.
- Fire containment lines are to be located such that they do not disturb archaeological sites.
- All at-risk for fire features will be protected from fire using a variety of methods, including: removing downed logs and heavy brush, constructing fire lines around structures, backfiring, utilizing fire resistant materials or wetting agents, and/or on-site monitoring during activities.
- Burning may be prohibited near these sites if no other means of protection can be accomplished.
- Crossings will be allowed only where existing breaches are observed
- Trees will be felled directionally away from ditches/canals to prevent damage.
- Trees contributing to the setting or feeling of a site will not be impacted. This includes feature trees and large diameter trees located adjacent to linear features.
- Trees in or near the walls of ditches/canals will not be cut if they are providing bank stability.

Findings

With implantation of the prescriptive SPMs, the Project will have No Impact on Cultural Resources.

VI. GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS: Would the project:				
a) 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?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) 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?	☐	☐	☐	☒

The action alternative proposes to treat approximately 840 acres through a series of understory hand thinning (up to 10" dbh), hand pile and burn, and broadcast burning. The treatment areas are dispersed over three subwatersheds and occur on both public (National Forest) and private lands. The following table represents the impact of the treatments, at the subwatershed level, in terms of Equivalent Roaded Area (ERA):

Table 4 Subwatershed Impacts in % Equivalent Roaded Area (ERA)

Subwatershed	Acres	Treatment Unit	Acres	Unit Prescription	ERA[1/] Acres	% ERA[2/]
Upper Indian Falls	9,936	Genesee Woods	506	Hand thin, hand pile, underburn	45	0.45
Hosselkus Creek	5,256	Heart K NW	119	Some followup hand thin and pile, underburn	10	0.19
E. Hosselkus Creek	6,195	Heart K SE	214	Some followup hand thin and pile, underburn	19	0.31

1/ Coefficients used were 0.033 for hand thin, pile and pile burn; 0.055 for underburn 2/ Percentage of the watershed directly affected by the proposed action.

Due to the low %ERA values, it was felt that determining the existing ERA for the subwatersheds or the percent of Threshold of Concern (TOC) was unnecessary.

Discussion

a) ***Would the project 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 California Geological Survey Special Publication 42.)

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

No Impact: The project will not cause rupture of a known earthquake fault, will not cause seismic ground shaking, will not cause seismic-related ground failure, including liquefaction, and will not cause any landslides or increase landslide potential.

b) ***Would the project result in substantial soil erosion or the loss of topsoil?***

Less Than Significant Impact: The project consists of low-intensity broadcast burning that will not result in substantial soil erosion or the loss of topsoil.

c) ***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?***

No Impact: The project is not located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and will therefore not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

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

No Impact: The project is not located on an expansive soil, and will not create substantial risks to life or property.

e) ***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?***

No Impact: The project will not require the use of septic tanks or waste water disposal systems.

VII. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion

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

Less Than Significant Impact: The project will generate greenhouse gas (GHG) emissions by broadcast burning of surface vegetation, pile burning, and the use of fuel by equipment (chainsaw) operation and vehicles traveling to and from the site. However, the project is intended to reduce fuel loads such that fewer, less frequent, smaller, and shorter duration wildfires would occur, reducing GHG emissions over time. The Northern Sierra Air Quality Management District (NSAQMD) currently has no guidance concerning CEQA evaluation of GHG emissions. To evaluate whether the project would result in significant GHG emissions, this analysis uses an approach that is consistent with the approach used by the California Board of Forestry and Fire Protection to evaluate a statewide vegetation treatment program (Board of Forestry 2017 pages 4-415 to 4-426). To evaluate the significance of the project's GHG emissions, the expected avoided GHG emissions from a catastrophic wildfire were compared to the GHG emissions expected from implementation of the project.

FUELS REDUCTION AND FOREST HEALTH TREATMENTS

The GHG emissions from forest treatment activities vary depending on site conditions, timing and duration of treatments, treatment approach and equipment, and other factors. The Draft Environmental Impact Report recently prepared by the California Board of Forestry and Fire Protection for a statewide vegetation treatment program provides typical GHG emission estimates for fuels reductions treatments (Board of Forestry 2017). While these do not reflect exact emissions from the project, these GHG estimates have been scaled down to provide a reasonable estimate of GHG emissions from hand thinning and prescribed fire activities associated with the project. As described in Section III, Air Quality, discussion a), use of chainsaws and worker commute trips during implementation project activities would be minor. Therefore, GHG emissions associated with these activities would be minimal, and are not quantitatively evaluated.

HAND THINNING

Hand thinning, which includes meadow restoration treatments, is proposed for 506 acres of the project area, with some follow-up thinning in the rest of the project area (333 acres) that was thinned a decade ago. The entire project area is analyzed as if hand thinning operations were to occur to the same degree, whereas the

thinning that would occur on the balance of the project area (333 acres) would be minimal. The Board of Forestry estimated equipment emissions from power tools like chainsaws and power brush saws used during manual treatments, as well as emissions from typical worker trips to and from a treatment site. This analysis found that a 2256-acre manual treatment project would result in 0.97 MT CO2e emissions (Board of Forestry 2017, Appendix H). Based on the estimated emissions per acre in the Board of Forestry analysis, the 839 acres of hand thinning treatments in the project would result in approximately 0.36 MT CO2e emissions (Appendix B).

PRESCRIBED FIRE

Prescribed fire treatments and pile burning, including site preparation activities such as fire line construction, are proposed on the entire 839 acres of the project area, though environmental restrictions will reduce the actual number of acres where implementation of prescribed fire is possible. These treatments require large crew sizes and the use of handheld tools. The Board of Forestry estimated equipment emissions from power tools like chainsaws, as well as emissions from typical worker trips to and from a treatment site for prescribed fire treatments. The Board of Forestry modeled emissions from typical burning scenarios in a Sierra Nevada Mixed Conifer forest, which considered emissions from combustion of vegetation, associated equipment, and worker trips. This analysis provided estimated emissions of approximately 20.22 MT CO2e per acre (Board of Forestry 2017, Appendix H). For the 839-acre project site, this would result in estimated emissions of 16,963.7 MT CO2e (Appendix B).

WILDFIRE EMISSIONS

The project is intended to reduce the risk for wildfire, but it is still possible that wildfires would occur on the site after treatment. Wildfires that occur after treatment would likely be smaller, of shorter duration, and less intense than under existing conditions, as a result of the reduction of understory biomass density after prescribed burning. The Board of Forestry EIR does not provide treated and untreated CO2e emission estimates from wildfires in Sierra Nevada forests, but these emission estimates are available from a USFS Region 5 modeling effort that evaluated a similar forest treatment project in the northern Sierra, just north of Lake Tahoe (USFS 2015). This modeling effort used the Forest Vegetation Simulator (FVS) model to produce emission estimates from wildfires occurring on a northern Sierra forest before and after a similar fuel reduction treatment. While emissions would vary based on stand characteristics and treatment type, this modeling effort provides a reasonable approximation of wildfire emissions within the project area. The FVS modeling predicted that an untreated northern Sierra mixed conifer stand would emit 79 MT CO2e per acre from a wildfire, and a treated stand would emit 17.6 MT CO2e per acre (USFS 2015). For the 839-acre project area, this would result in 66,281.0 MT CO2e from a wildfire under existing conditions. After project implementation, the area could be expected to produce approximately 14,766.4 MT CO2e from a smaller and reduced-intensity wildfire (Appendix B).

Table 5. Greenhouse Gas Emissions Summary

Activity	No Project – Untreated Emissions Scenario (MT CO2e)	Project Emissions - Treated Emissions Scenario (MT CO2e)
Hand Thinning		0.36
Prescribed Fire		16,963.70
Subtotal	N/A	16,964.06
Wildfire	66,281.00	14,766.40

Totals	66,281	31,730.46

As shown in Table 5, the combined emissions of project activities and a wildfire after project implementation are expected to produce approximately 31,730.46 MT CO2e, which is 34,550.54 MT CO2e less than the emissions produced by a wildfire without project implementation.

Additionally, carbon calculations were completed for the application of a California Department of Forestry and Fire Protection Forest Health Grant with the CARB carbon calculator tool and methodology (CARB 2017a). Modeling and calculations results for the proposed project area estimate the carbon stored within the project boundary without fuels reduction treatments and after implementation of the proposed treatment, with and without fire disturbance after treatment, to be over 100,000 metric tons under all three scenarios. The fourth possible scenario is fire disturbance in the project area without fuels reduction treatments; results estimated 6,559 metric tons of carbon stored in the project area under this scenario (Table 6).

Table 6. Summary of Carbon Storage in the Project Area Under Four Treatment and Fire Disturbance Scenarios

Scenario	...Fuels Reduction	...Fire Disturbance	MT C in Project Area
Carbon within the treatment boundary at the end of the project with...	X		110,826
	X	X	101,394
			104,709
		X	6,559

Note – Annual probability of fire occurrence in the project area is 56%, and the effective period for fuels treatments is 20 years.
MT C = metric tons of carbon stored

This CARB modeling and calculations method predicts the that over 90% of the carbon stored in the project area would be released in the event of a wildfire without treatment, whereas proposed treatments would effectively mitigate this potential emission source. Both GHG estimation approaches result in different figures for emissions estimates, though the conclusion to both approaches is the same. Because the project would result in less GHG emissions than would likely occur without the project, the impact would be less than significant.

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

Less than significant. In December 2017, CARB adopted its Climate Change Scoping Plan Update (Scoping Plan Update), which contains the main strategies California will use to reduce GHGs in order to reach the State's 2030 GHG emissions reduction target (CARB 2017b). This update builds upon the initial Scoping Plan with new strategies and recommendations. It defines CARB's climate change priorities required to meet the 2030 target, and also sets the groundwork to reach longer-term goals. The Scoping Plan Update recognizes the role of California's Natural and Working Lands in meeting California's GHG reduction goals. These lands include both forests and rangelands and can act as both source and sink. The Scoping Plan Update recognizes that some actions taken to address ecosystem health may result in temporary, short-term reductions in sequestration, but are necessary to maintain forest health and reduce losses due to wildfire. The goals set forward for these landscapes include reducing vegetative fuels.

California's overall plan for climate adaptation is expressed in the Draft Report Safeguarding California: 2017 Update (California Natural Resources Agency [CNRA] 2017). The plan provides policy guidance for state decision-makers and is part of continuing efforts to reduce impacts and prepare for climate risks. The Plan highlights climate risks in nine sectors in California, discusses progress to date, and makes realistic sector-specific recommendations. One of the key sectors is forestry, where the emphasis is on preparing for increased wildfire hazards, including treatment of hazardous fuels, and improving forest management approaches in a changing climate (CNRA 2017).

Plumas County and the NSAQMD currently do not have local plans, policies or regulations adopted to reduce GHG emissions. Because the project would reduce vegetative fuels and implement forest management treatments consistent with the First Update of the Climate Change Scoping Plan and Safeguarding California, the impact would be less than significant.

VIII. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan 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?	☐	☐	☐	☒
f) 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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) 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?	☐	☐	☒	☐

Discussion

a) *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

No Impact: Drip torch fuel will be transported to the project area in containers designed for that use. Fuel and oil will also be routinely used during hand thinning operations to operate and maintain equipment. No other hazardous materials will be transported, used, or disposed of. The project will not create a significant hazard to the public or the environment through the transport, use, or disposal of hazardous materials.

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

No Impact: There are no reasonably foreseeable upset and/or accident conditions associated with the project that could release hazardous materials into the environment.

c), d), e), f) and g).

No Impact: See discussion a) for hazardous materials discussion. The project is will have no impact on the environment through hazardous materials. The project is not near a school, airport/strip, nor will it interfere with an emergency plan/route.

h) 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?

Less Than Significant Impact: The project involves prescribed fire. Personnel carrying out the burn will be highly trained with prescribed burning and wildland firefighting, and will take all safety precautions necessary to avoid an escaped fire. Fire engines will be on-site during burning activities and patrols will be used once burning is complete to monitor the area. The project includes standard control practices that would protect people, structures, and infrastructure from negative effects from prescribed burning operations. Specific requirements for each burn will be described as a necessity for required burn plans/permits. The project will not expose people or structures to a significant risk of loss, injury or death involving wildland fires. The project would result in long-term benefits related to exposure of people or structures to a substantial risk of loss, injury, or death involving wildland fire due to reductions of existing fuel accumulations in the project area. The impact would be than significant impact.

IX. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) 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)?	☐	☐	☐	☒
c) 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?	☐	☐	☐	☒
d) 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?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) 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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) 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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

Discussion

a) Would the project violate any water quality standards or waste discharge requirements?

No Impact: The project will not violate any water quality standards or waste discharge requirements.

b) 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 that would not support existing land uses or planned uses for which permits have been granted)?

No Impact: The project will not substantially deplete groundwater supplies or interfere with groundwater recharge. There will be no effect on aquifer volume or groundwater table level as a result of the project.

c) 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 on- or off-site erosion or siltation?

No Impact: There is no excavation or significant ground disturbance associated with the project. The project will not substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation.

d) 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 on- or off-site flooding?

No Impact: There will be no excavation or ground disturbance associated with the project. Broadcast burning will be implemented using a low-intensity burn prescription that will not be hot enough to cause hydrophobic soil conditions which could affect runoff rates. The project will not substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding.

e) Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

No Impact: The project will not contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

f) Would the project otherwise substantially degrade water quality?

No Impact: The project will not substantially degrade water quality. See discussion c) and d) above.

g) 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?

No Impact: The project does not include the placement of any housing.

h) Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?

No Impact: The project does not include the placement of any structures.

i) 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?

No Impact: The project will not expose people or structures to a significant risk of loss, injury or death involving any type of flooding.

j) Would the project result in inundation by seiche, tsunami, or mudflow?

No Impact: The project will not result in inundation by seiche, tsunami or mudflow.

X. LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b)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?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion

a) Would the project physically divide an established community?

No Impact: No communities will be physically divided by the project.

b) 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, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact: The project does not conflict with any applicable land use plan, policy, or regulation.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact: The project does not conflict with any applicable habitat conservation plan or natural community conservation plan. There are no proposed or approved habitat conservation plans or natural community conservation plans in Plumas County.

XI. MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion

a) 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?

No Impact: The project would not affect the availability of mineral resources, should they exist within the project area.

b) 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?

No impact: There are no locally important mineral resource recovery sites within the project area.

XII. NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XII. NOISE: Would the project result in:				
a) 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?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) 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?	☐	☐	☐	☒

Discussion

a) Would the project create exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?

Less Than Significant Impact: The only noise generated by the project will be from chainsaws and vehicles operating for a limited duration. This will not generate noise levels in excess of standards established in local plans, ordinances, or other applicable noise standards. The project area and adjacent land is in a remote area of Plumas County. The operation of chainsaws for the proposed activities would be temporary and not create a permanent source of noise. The impact would be less than significant.

b) Would the project create exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

No Impact: The project will not generate excessive groundborne vibration or noise levels.

c) Would the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact: The project will not create any permanent sources of noise.

d) Would the project create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact: The only noise generated by the project will be from chainsaws and vehicles operating for a short duration. This will not create a substantial temporary or periodic increase in ambient noise levels in the project vicinity.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact: The project is not located within an airport land use plan or within two miles of any airport.

f) 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?

No Impact: The project is not within the vicinity of a private airstrip.

XIII. POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING: Would the project:				
a) 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

a) ***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)?***

No Impact: The project will not induce population growth. There are no new homes, businesses or expansion of infrastructure associated with the project.

b) ***Would the project displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?***

No Impact: No homes will be affected by the project.

c) ***Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?***

No Impact: There are no residents within or near the project area that will be displaced by the project.

XIV. PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES:				
a) 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?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Discussion

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

Fire protection? Police protection? Schools? Parks? Other public facilities?
No Impact: The project will not result in any changes that would require expansion or creation of public services, including fire protection, police protection, schools, parks, or other public facilities.

XV. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact: The project will not increase recreation on the property. Physical deterioration of the area will not occur as a result of the project.

b) Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No Impact: The project does not include recreational facilities and will not require the construction or expansion of any recreational facilities.

XVI. TRANSPORTATION/TRAFFIC

XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) 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?	☐	☐	☐	☒
b) 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?	☐	☐	☐	☒
c) 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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Discussion

a) ***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?***

No Impact: The project is in a remote area and will not impact traffic circulation patterns.

b) ***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?***

No Impact: The project is in a remote area and will not impact traffic congestion management.

c) 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?

No Impact: The project is in a remote area and will not impact air traffic patterns.

d) 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)?

No Impact: The project is in a remote area and does not include any design features that could affect traffic.

e) Would the project result in inadequate emergency access?

No Impact: The project will not affect emergency access.

f) 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?

No Impact: The project is in a remote area and will not impact public transit, bicycle, or pedestrian facilities.

XVII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Discussion

The Northeast Information Center (NEIC) of the California Historic Resources Information System (CHRIS) was contacted via a letter on August 4, 2017 by DZC Archaeology & CRM Consulting requesting a file search. The purpose of the file search was to determine if cultural resources surveys were conducted on or adjacent to the project site. Additionally, the Area of Potential Effect (APE) map was provided to the NEIC to determine if there was a level of sensitivity regarding historical and cultural resources. In their response letter dated September 5, 2017 the NEIC writes that there are nineteen cultural resources present within, or immediately adjacent to, the APE, and that fifteen previous cultural resource surveys had been conducted within, or adjacent to, the APE. The State Office of Historic Preservation Historic Property Directory (OHP HPD) (which includes listings of the California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and the National Register of Historic Places) lists no recorded buildings or structures within or adjacent to the APE. In addition to these inventories, the NEIC base maps show no recorded buildings or structures within the APE. Similar studies were conducted at the Plumas County Museum and the Plumas National Forest, Mt. Hough District, both of which confirmed the presence of these resources.

The Native American Heritage Commission (NAHC) was contacted on August 4, 2017, requesting a Sacred Lands File Search. The NAHC responded that the area was negative for SLFs on file. Both the NAHC and the NEIC recommended contacting the local Native American representatives as there is a high potential for Traditional Cultural Properties with the APE.

Based on the recommendation of the NEIC and the NAHC, a project notification and request for comment were sent to the Tribal Historic Preservation Officers from the Greenville Rancheria, Mooretown Rancheria of Maidu Indians, the Susanville Indian Rancheria, the Washoe Tribe of Nevada and California, and the Tsi Akim Maidu. A representatives of the Mountain Maidu Consortium, and a direct descendant of the Native American family directly affiliated with the APE, responded that they would be in agreeance to the application of standard protection measures (for cultural resources) as outlined in the Programmatic Agreement among the U.S.D.A Forest Service, Pacific Southwest Region, California State historic Preservation Officer, and Advisory Council on Historic Preservation (R5PA).

A cultural resource survey and inventory was undertaken during September 2017. The work was overseen by a Secretary of the Interior qualified Registered Professional Archaeologist and a team of professional

archaeologists. The survey team identified both new and previously recorded resources spanning both the pre-contact and historic eras. Site specific mitigations, referred to as Standard Protection Measures (SPMs) were prescribed for each resource based on the presence or absence of at-risk for fire constituents, and the type of cultural constituents present within the site. All SPMs comply with the federal level R5PA.

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

Less than Significant Impact with Mitigation: According to the Cultural Resources Inventory Report, there are locations within the project area identified as containing cultural resources. These resources should be treated as historically significant, and therefore protected, unless further investigations provide evidence to the contrary (PRC 5024.1, Title 14 CCR, Section 4850 et seq.). Starting July 1, 2015, Lead Agencies are to consult with Tribes and initiate consultation prior to the release of a negative declaration, mitigated negative declaration or environmental impact report under the California Environmental Quality Act (CEQA). More specifically, AB 52 creates a new category of resources in CEQA called "tribal cultural resources" and seeks to engage the expertise of Native American tribes in the protection and preservation of those resources. To fulfill that purpose, the new law requires the lead agency to consult with a local Native American tribe as part of the environmental review process. The law also requires that the details of the tribal cultural resource be kept confidential and provides examples of mitigation measures that focus on preserving tribal cultural resources.

The Cunningham Family, direct Mountain Maidu descendants for the project area, were engaged early in the process and have expressed concern for cultural resources in the APE. In a cooperative dialogue, they have disclosed areas of concern, which are now protected by project mitigation measures. If any incidental discoveries are made of potentially culturally significant resource, the tribes will be consulted on said resource.

b) ***Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?***

Less than Significant Impact with Mitigation: According to the Cultural Resources Inventory Report, there are locations within the project area identified as containing cultural resources. These resources should be treated as historically significant, and therefore protected, unless further investigations provide evidence to the contrary (PRC 5024.1, Title 14 CCR, Section 4850 et seq.). Starting July 1, 2015, Lead Agencies are to consult with Tribes and initiate consultation prior to the release of a negative declaration, mitigated negative declaration or environmental impact report under the California Environmental Quality Act (CEQA). More specifically, AB 52 creates a new category of resources in CEQA called "tribal cultural resources" and seeks to engage the expertise of Native American tribes in the protection and preservation of those resources. To fulfill that purpose, the new law requires the lead agency to consult with a local Native American tribe as part of the environmental review process. The law also requires that the details of the tribal cultural resource be kept confidential and provides examples of mitigation measures that focus on preserving tribal cultural resources.

The Cunningham Family, direct Mountain Maidu descendants for the project area, were engaged early in the process and have expressed concern for cultural resources in the APE. In a cooperative dialogue, they have

disclosed areas of concern, which are now protected by project mitigation measures. If any incidental discoveries are made of potentially culturally significant resource, the tribes will be consulted on said resource.

Mitigation Measures

Mitigation measures to protect cultural resources in and adjacent to the project area have been outlined in Section V. Cultural Resources of this document. A detailed index noting which mitigation measures (Appendix A) – referred to here as SPMs - are applicable to which resources, is available for review in the specialist report. The mitigation measure items are the identified SPMs for this project, all of which conform to the SPMs as outlined in the R5PA.

XVIII. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVIII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) 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?	☐	☐	☐	☒
c) 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?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) 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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Discussion

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact: The project will not generate any wastewater.

b) 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?

No Impact: The project will not require or result in the construction or expansion of water or wastewater facilities.

c) 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?

No Impact: The project will not require or result in the construction or expansion of storm water drainage facilities.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact: The project will not require the use of water supplies from any existing entitlements or resources, and will not require new or expanded entitlements.

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

No Impact: The project will not require service from a wastewater treatment provider.

f) ***Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?***

No Impact: The project will not require service by a landfill.

g) ***Would the project comply with federal, state, and local statutes and regulations related to solid waste?***

No Impact: The project will not generate any solid waste.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIX. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does 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?	☐	☐	☐	☒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Discussion

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

No Impact: The project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory.

b) ***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.)***

No Impact: The project will not have impacts that are individually limited, but cumulatively considerable.

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

No Impact: The project will not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

LIST OF PREPARERS OF THIS DOCUMENT

Brad Graevs
Project Manager
Plumas Audubon Society
429 Main St.
Quincy, CA 95971

Dimitra Zalarvis-Chase, RPA
Cultural Resource Specialist
DZC Consulting
2370 Lindstrom Ave
Fairhaven, CA 95564

Denny M. Churchill
Certified Professional Soil Scientist No. 0755

Jim Battagin
Professional Botanist
Butterfly Botanical Consultants
Quincy, CA 95971

REFERENCES CITED

Anderson, Hal E. 1982. Aids to Determining Fuel Models for Estimating Fire Behavior. USDA Forest Service. General Technical Report INT-122.

California Air Resources Board. 2015. Area Designations Maps/State and National. Available: http://www.arb.ca.gov/desig/adm/adm.htm. Accessed January 2019.

California Air Resource Board. 2017a. California Air Resources Board Calculator for the California Department of Forestry and Fire Protection Forest Health Grant Program Quantification Methodology Available: https://www.arb.ca.gov/cc/capandtrade/ auctionproceeds/calfire-fh-calculator-17-18.xlsx Accessed May 2018

California Air Resource Board. 2017b. California Air Resources Board Quantification Methodology for the California Department of Forestry and Fire Protection Forest Health Grant Program Available: https://www.arb.ca.gov/cc/capandtrade/ auctionproceeds/calfire-fh-finalqm-17-18.pdf Accessed May 2018

California Board of Forestry and Fire Protection. 2017. Program Environmental Impact Report for the Vegetation Treatment. Available: http://bofdata.fire.ca.gov/board_committees/resource_protection_committee/current_projects/vegetation_treatment_program_environmental_impact_report_%28vtpeir%29/ Accessed January 2018.

California Department of Fish and Wildlife. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. https://www.wildlife.ca.gov/Conservation/Plants.

California Native Plant Society. 2016. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org. Accessed April 2017.

California Natural Resources Agency. 2017. Draft Report Safeguarding California Plan: 2017 Update. Available:http://resources.ca.gov/wp-content/uploads/2017/05 /DRAFT-Safeguarding-California- Plan-2017-Update.pdf. Accessed November 2018.

DeByle, N. B. 1984. Managing wildlife habitat with fire in the aspen ecosystem. In: Fire's effects on wildlife habitat-symposium proceedings. USDA GTR INT-186.

Eckert, P. Jennings. 2007. Carbon Sequestration in Sierra Pacific Industries Forests: A Watershed Example. Tetra Tech EC, Inc., Bothell, WA. [Submitted to Forest Ecology and Management.]

Fellers, G. M. and K.L. Freel. 1995. A Standardized Protocol for Surveying Aquatic Amphibians. Technical Report NPS/WRUC/NRTR-95-01. National Biological Service Cooperative Park Studies Unit, University of California Division of Environmental Studies, Davis, California. 117 pp.

Helms, J.A. 2007. Thoughts on managing forests for carbon sequestration. The Forestry Source.

Lyon, L.J., and P.F. Stickney. 1976. Early vegetal succession following large northern Rocky Mountain wildfires. Proceedings of the Tall Timbers Fire Ecology Conference 14: 355-375.

Mader, S. 2007. Climate Project: Carbon Sequestration and Storage by California Forests and Forest Products. [Technical Memorandum prepared for California Forests for the Next Century] CH2M HILL, Sacamento, CA.

Northern Sierra Air Quality Management District (NSAQMD). 2007. Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects. Revised 9/10/2007.

Plumas Audubon Society. 2016. Genesee Valley Wildfire Restoration Plan. Revised August 2016.

Plumas County. 2012 (November). 2035 Plumas County General Plan Update Draft Environmental Impact Report.

Price, P. W. 1991. The plant vigor hypothesis and herbivore attack. Oikos 62: 244-21.

Spiegel, L. H. and P. W. Price. 1996 Plant aging and the distribution of *Rhyacionia neomexicana* (Lepidoptera: Tortricidae). Population Ecology 25: 359-365.

Stein, S. J., P. W. Price, W. G. Abrahamson and C. F. Sacchi. 1992. The effects of fire on stimulating willow regrowth and subsequent attack by grasshoppers and elk. Oikos 65: 190-196.

USDA 1993. Protocol for Surveying for Spotted Owls in Proposed Management Activity Areas and Habitat Conservation Areas. March 12th, 1991 (Revised February 1993). USDA Forest Service, Pacific Southwest Region, CA.

USDA 2000. Survey Methodology for Northern Goshawks in the Pacific Southwest Region. USDA Forest Service. August 9th, 2000.

U.S. Forest Service. 2015. Unpublished data. United States Forest Service, Region 5. Forest Vegetation Simulator modeling prepared by Nadia Tase, Acting Region 5 Co-Climate Change Coordinator, to evaluate the North Tahoe Interagency Forest Health and Bioenergy Project.

USDA Forest Service. 2018a. Decision Memo, Genesee Valley Watershed Improvement Project, USDA Forest Service, Mt. Hough Ranger District. May, 2018.

USDA Forest Service. 2018b. Biological Evaluation/Biological Assessment, Management Indicator Species Report, Migratory Bird Species Report, Genesee Valley Watershed Improvement Project. April 2018. Unpublished Report written by Brad Graevs and Colin Dillingham.

USDA Forest Service. 2018c. Botany Biological Evaluation, Genesee Valley Watershed Improvement Project. April 2018. Unpublished Report written by Brad Graevs and Reviewed by Jim Belsher-Howe.

Wiedinmyer, C. and Jason C Neff, 2007. Estimates of CO2 from fires in the United States: Implications for carbon management Carbon Balance and Management.

Zalarvis- Chase, D. et al. 2017. A Cultural Resource Investigation, CRIR/INFRA #R2018051102019, Genesee Valley Watershed Improvement Project. October, 2017.

Zielinski, W.J. and T.E. Kucera. 1995. American marten, fisher, lynx, and wolverine: survey methods for their detection. USDA Forest Service, Pacific Southwest Research Station, General Technical Report PSW-GTR-157.

Appendix A

Mitigation Monitoring and Reporting Plan (MMRP) for the Genesee Valley Watershed Improvement Project Initial Study/Mitigated Negative Declaration

In accordance with CEQA Guidelines Section 15074(d), when adopting a mitigated negative declaration, the lead agency will adopt a Mitigation Monitoring and Reporting Plan (MMRP) that ensures compliance with mitigation measures required for project approval. The Feather River Resource Conservation District (FRRCD) is the lead agency for the above-listed project and has developed this MMRP as a part of the final Initial Study/Mitigated Negative Declaration (IS/MND) supporting the project. This MMRP lists the mitigation measures developed in the IS/MND which were designed to reduce environmental impacts to a less-than-significant level. This MMRP also identifies the party responsible for implementing the measure, defines when the mitigation measure must be implemented, and which party or public agency is responsible for ensuring compliance with the measure.

Potentially Significant Effects and Mitigation Measures
The following is a list of the resources that will be potentially affected by the project and the mitigation measures made part of the Initial Study/Mitigated Negative Declaration.

Mitigation Measure 1 - Sensitive Plant Protection.
The *Cypripedium montanum* occurrence on the Heart K SE unit will be avoided in order to protect this occurrence and its habitat.

1.1 - No project activities will take place within 25 ft. of the occurrence (piling, pile burning, or broadcast burning), and tress that could potentially land on or near the occurrence will be felled away from the occurrence.
1.2 - If any other TESP plant species is incidentally discovered a professional botanist will be consulted on how to protect the discovered occurrence.

For location of occurrence and more information on survey results see Appendix A and Genesee Valley WIP botany reports (USDA 2018c).

Schedule: Occurrence shall be located and marked with flagging prior to operations and this protection measure shall apply for the duration of the project.

Responsible Party: FRRCD shall be responsible for carrying out this mitigation measure.

Verification of Compliance:
Monitoring Party: FRRCD
Initials: _____
Date: _____

Mitigation Measure 2 – Yellow-Legged Frog and other Aquatic Species Protections. The following measures are designed to protect Yellow-legged frogs and other aquatic TESP species from any incidental take or degradation of habitat as a result of project activities. For locations of streams, buffer zones and more

information on survey results see Appendix A and Genesee Valley WIP wildlife report (Dillingham and Graevs, Wildlife BE/BA, MIS, and Migratory Bird Input, October 30, 2017).

2.1 - Chainsaw thinning allowed within the inner Riparian Conservation Area, but no piling of material within 82 feet of perennial streams over 4500 feet elevation (to prevent risk of burning frogs that choose to hibernate in piles).

2.2 - No piling within 25 feet of perennial or intermittent streams at all elevations.

2.3 - Chainsaw thinning over 4500 feet elevation would be restricted to summer season when frogs are in streams, and not in uplands See Table 2 in Mitigation Measure 3.

2.4 - No prescribed fire ignited within 25 feet of streams over 4500 feet elevation.

2.5 - New or existing water draft sites would be evaluated with the Mt. Hough Ranger District (MHRD) Biologist prior to changes or use. Drafting sites shall be visually surveyed for amphibians and their eggs before drafting begins. Forest personnel and contractors shall use the Forest Service approved suction strainer (FSM 5161) and/or CAL FIRE approved strainer or other foot vales with screens having openings less than 2mm in size at the end of drafting hoses. The suction strainer shall be inserted close to the substrate in the deepest water available; the suction strainer shall be placed on a shovel, over plastic sheeting, or in a canvas bucket to avoid uptake of substrate or aquatic biota.

Schedule: Stream buffer zones shall be located and marked with flagging prior to operations and this protection measure shall apply for the duration of the project. Drafting sites shall be surveyed before use.

Responsible Party for Mitigation Measures 2.1-2.4: A Registered Professional Forester, contracted for the period(s) of implementation, shall be responsible for carrying out these mitigation measures.

Responsible Party for Mitigation Measures 2.5: The USFS shall be responsible for carrying out this mitigation measure.

Verification of Compliance for Mitigation Measures 2.1-2.4:
Monitoring Party: Registered Professional Forester
Initials: _____
Date: _____

Verification of Compliance for Mitigation Measures 2.5:
Monitoring Party: USFS Biologist - MHRD
Initials: _____
Date: _____

Mitigation Measure 3 Limited Operating Periods. Limited Operating Periods will be adhered to where operations will be "limited" as described in Table 2.

Table of Limited Operating Periods (LOPs) for the Genesee Valley Watershed Improvement Project

Species	Location	Limited Operating Period	Reference Pages	Mitigation ID
Yellow-legged Frogs	Instream work	Dry Stream Channel or pre-project survey	Biological Opinion	3.1
	Upland work and burning	October 01 – April 15	Biological Opinion	3.2
California Spotted Owl	Within 1/4 mile of nests or within protected activity center boundary	March 1 - August 15	2 - 8* Modified by October 2006 RO Letter	3.3
Goshawk	Within 1/4 mile of nests or within protected activity center boundary	February 15 - September 15	A - 60**	3.4

Pallid Bat and Townsend's Big-eared Bat	W/in 1/4 mile of maternity and other roosts	May 1 – August 15	Professional Judgment	3.5

*Herger-Feinstein Quincy Library Group Forest Recovery Act – Final Environmental Impact Statement (HFQLGFRA-FEIS) (1999), Page 2-8, Table 2.3.
**Sierra Nevada Forest Plan Amendment – Final Supplemental Environmental Impact Statement (SNFPA FSEIS) – Record of Decision (ROD) (2004), page A-54, A-58, A-60, A-61 and A-62.

Schedule: Surveys shall be completed to determine nesting status of avian species prior to operations and this protection measure shall apply for the duration of the project. In the event that a bat roosting site is discovered prior to or during project activities a limited operating period would be applied.

Responsible Party: Plumas Audubon Society shall be responsible for carrying out this mitigation measures 3.1-3.5 for the 2018 season. Any subsequent season or year in which project activities are to be carried out the USFS shall be responsible for ensuring that adequate surveys have been conducted or LOPs are implemented in order to carry out these mitigation measures 3.1-3.4. Project Implementation Coordinator shall be responsible for carrying out implementation measure 3.5.

Verification of Compliance for Mitigation Measures 3.1-3.4 for 2018:
Monitoring Party: Plumas Audubon Society
Initials: _____
Date: _____

Verification of Compliance for Mitigation Measures 3.1-3.4 after 2018:
Monitoring Party: USFS
Initials: _____
Date: _____

Verification of Compliance for Mitigation Measure 3.5:
Monitoring Party: Project Implementation Coordinator
Initials: _____
Date: _____

Mitigation Measure 4 – Protections for Cultural Sites
A detailed index noting which mitigation measures – referred to here as SPMs - are applicable to which resources, is available for review in the specialist report (Weinberg and Zalarvis-Chase, Heritage Resources Input, November 6, 2017). The following items are the identified SPMs for this project, all of which conform to the SPMs as outlined in the R5PA.

4.1 - Site boundaries will be flagged for identification.
4.2 - No ground-disturbing activities (e.g. skidding, use of tracked equipment, construction of temporary roads or landings) will be allowed within site boundaries.
4.3 - Staging areas will be located well away from archaeological sites.
4.4 - No staging of heavy equipment will occur within site boundaries.
4.5 - Hand thinning (i.e. loppers, chainsaws) will be allowed within site boundaries, with minimal ground disturbance (i.e. hand bucking, hand carrying) when supervised by a **Forest archaeologist.**
4.6 - If directional felling will be required within site boundaries, a **Forest Service archaeologist** must be consulted.
4.7 - All slash is to be piled away from sites.
4.8 - Piling of thinned fuels is prohibited within site boundaries unless piling locations are predetermined by a **Forest archaeologist.**

4.9 - Low-intensity understory burns will be allowed across sites, provided they have no flammable (at-risk) features and a low fuel load. See specialist report for details on which sites are at-risk (Weinberg and Zalarvis-Chase, Heritage Resources Input, November 6, 2017).
4.10 - Fire containment lines are to be located such that they do not disturb archaeological sites.
4.11 - All at-risk for fire features will be protected from fire using a variety of methods, including: removing downed logs and heavy brush, constructing fire lines around structures, backfiring, utilizing fire resistant materials or wetting agents, and/or on-site monitoring during activities. Burning may be prohibited near these sites if no other means of protection can be accomplished.
4.12 - Crossings will be allowed only where existing breaches are observed
4.13 - Trees will be felled directionally away from ditches/canals to prevent damage.
4.14 - Trees contributing to the setting or feeling of a site will not be harvested. This includes feature trees and large diameter trees located adjacent to linear features.
4.15 - Trees in or near the walls of ditches/canals will not be cut if they are providing bank stability.

Schedule: Flagging site locations and boundaries (mitigation 4.1) shall be completed prior to operations and this protection measure shall apply for the duration of the project. Mitigations 4.2-4.15 shall be adhered to as applicable during project implementation.

Responsible Party: A Registered Professional Forester contracted by the Project Implementation Coordinator shall be responsible for carrying out mitigation measure 4.1 (flagging). The Registered Professional Forester and Project Implementation Coordinator shall be responsible for adhering to mitigation measures 4.2-4.15, and will not complete activities that are limited per mitigation measures 4.5, 4.6, and 4.8 if an archaeologist is not present.

Verification of Compliance for Mitigation Measure 4.1:
Monitoring Party: Registered Professional Forester
Initials: _____
Date: _____

Verification of Compliance for Mitigation Measures 4.2-4.15:
Monitoring Party: Contractor and Project Implementation Coordinator
Initials: _____
Date: _____

Appendix B
Air Quality and Greenhouse Gas Calculations

Genesee Valley WIP Air Quality Calculations					
Activity	Emission Source	ROG (lb/day)	NOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
Hand Thinning	Equipment Emissions	0.005	0.00	0.00	0.00
	Worker Trip Emissions	0.126	0.94	0.23	0.09
	Hand Thinning Sub Total	0.131	0.938	0.228	0.093
Prescribed Fire for Tree Dominated Area	Equipment Emissions	0.23	2.17	0.34	0.20
	Worker Trip Emissions	0.18	0.30	0.61	0.16
	Prescribed Fire equipment and worker Sub Total	0.41	2.47	0.95	0.36
	Fire Emissions	286,000.00	185.00	95,333.00	78,000.00
Total Project Activity Emissions		286,000.54	188.45	95,334.18	78,000.45
Project Equipment and Worker Subtotal Emission		0.541	3.453	1.178	0.453

NSAQMD Air Pollutant Emissions Thresholds	
Level	PM10 (lb/day)
Level "A" Threshold	<79
Level "B" Threshold	79-137
Level "C" Threshold	>137

The District has developed a tiered approach to significance levels: a project with emissions meeting Level A thresholds will require the most basic mitigations; projects with projected emissions in the Level B range will require more extensive mitigations; and those projects which will exceed Level C thresholds will require the most extensive mitigations.

Genesee Valley WIP GHG Emissions Summary				
Activity	Emissions Source	CO2e (MT/yr)	CO2e (MT/acre)	Net Activity GHG Emissions (MT CO2e)
Hand Thinning	Equipment	0.01		
	Worker Trips	0.96		
	Activity Sub Total	0.97	0.0004	0.36
Prescribed Fire	Equipment	6.35		
	Worker Trips	6.14		
	Fire	223852		
	Activity Sub Total	223864.49	20.22	16962.77
Total Project Activity Emissions		447730.92	NA	16963.13
Wildfire on Treatment Acres (Treated Scenario)	Fire	NA		14766.40
Project Activity Emissions + Wildfire on Treated Stand				31729.53
Wildfire on Project Area (Untreated Scenario)	Fire	NA		66281.00
Net change (Project Scenario compared to No Project Scenario)				-34551.47

Genesee Valley WIP GHG Emissions Factors										
Activity	Emission Source	ROG (lb/day)	NOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (MT/yr)	Treated Acres per Year	Calculated CO2e (MT/acre)	GVWIP Acres Treated	GVWIP GHG Emission (MT CO2e)
Hand Thinning	Equipment Emissions	0.005	0.00	0.00	0.00	0.01	2,256.00	0.0004	839	0.36
	Worker Trip Emissions	0.126	0.94	0.23	0.09	0.96				
	Sub Total	0.131	0.938	0.228	0.093	0.970				
Prescribed Fire for Tree Dominated Area Mediterainian Climate Mixed Forest. Sierra Nevada Mixed Conifer (Sugar Pine, Douglas Fir, Oak Forest)	Equipment Emissions	0.23	2.17	0.34	0.20	6.35	11,072.00	20.22	839	16962.77
	Worker Trip Emissions	0.18	0.30	0.61	0.16	6.14				
	Sub Total	0.41	2.47	0.95	0.36	12.49				
	Fire Emissions	286,000.00	185.00	95,333.00	78,000.00	223,852.00				
Wildfire on Treatment Acres (Treated Scenario)	Fire Emissions	N/A	N/A	N/A	N/A	N/A	N/A	17.6	839	14,766.40
Wildfire on Treatment Acres (Untreated Scenario)	Fire Emissions	N/A	N/A	N/A	N/A	N/A	N/A	79	839	66,281.00

(1) Source for "VTPEIR Treated Acres Per Year, Hand Thinning": California Board of Forestry and Fire Protection. 2017. Draft Vegetation Treatment Program PEIR for Recirculation , pp 4-102. Available: http://bofdata.fire.ca.gov/board_committees/resource_protection_committee/current_projects/vegetation_treatment_program_environmental_impact_report_%28vtpeir%29/
(2) Source: California Board of Forestry and Fire Protection. 2017. Draft Vegetation Treatment Program PEIR for Recirculation, Appendix H. Available: http://bofdata.fire.ca.gov/board_committees/resource_protection_committee/current_projects/vegetation_treatment_program_environmental_impact_report_%28vtpeir%29/
(3) Source: U.S. Forest Service. 2015. Unpublished data. United States Forest Service, Region 5. Forest Vegetation Simulator modeling prepared by Nadia Tase, Acting Region 5 Co-Climate Change Coordinator, to evaluate the North Tahoe Interagency Forest Health and Bioenergy Project.