

**Final
Initial Study/Mitigated Negative Declaration:
Soaproot Stewardship Project**

Lead Agency

Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, CA 95603
Contact: Matthew Daley, Senior Grants Analyst
530-823-4698

March 2014

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR THE PROPOSED SOAPROOT STEWARDSHIP PROJECT

Public Notice is hereby given that an Initial Study and Draft Mitigated Negative Declaration (IS/MND) is available for public review for the Soaproot Stewardship Project.

Project Location: The proposed project is located in the High Sierra Ranger District on the Sierra National Forest, in the Soaproot Management Unit, northeast of Cherry Flat and southwest of Grand Bluffs, south of State Route 168 and Dinkey Creek Road, approximately 5 miles south of Shaver Lake and approximately 30 miles northeast of Fresno, Fresno County, California. Township (T) 10 South (S), Range (R) 25 East (E), Sections 9, 10, 12, 15, 16, 22-24, 26, 29-33; T11S R25E Sections 3-8; T10S R24E Sections 24 and 25; and T10S R26E Section 18, Mount Diablo Base and Meridian. Latitude / Longitude: 37.01955 / -119.264145.

Project Description: The High Sierra Ranger District is requesting approximately \$350,000 in funding from the Sierra Nevada Conservancy's Proposition 84 Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Grant Program to reduce hazardous fuels and restore ecological components in the Soaproot Stewardship Project area in the Sierra National Forest. This project would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth.

The project includes restoring key features of diverse, fire-adapted forests, including heterogeneity at multiple scales, reduced surface and ladder fuels, improved watershed resilience and function, and improve habitats for sensitive wildlife and botanical species within the Soaproot Stewardship Project. Restoration treatments would be applied to approximately 1,035 acres of an approximately 7,120-acre project area involving a combination of biomass removal, tractor and grapple piling, and pile burning treatment methods. The project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest. Refer to Section 2.0, below, for a detailed project description.

Document Adoption: The public comment period began January 3, 2014 and extended to February 3, 2014. The MND will be considered by the Sierra Nevada Governing Board at a public meeting on March 13, 2014 located at: California Department of Food and Agricultural Auditorium, 1220 N Street, Sacramento, CA 95814 Questions regarding the March 2014 Governing Board meeting may be provided to Matthew Daley, Senior Grants Analyst, at Matthew.Daley@sierranevada.ca.gov or at the following address:

Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, CA 95603

MITIGATED NEGATIVE DECLARATION

Project Title: Soaproot Stewardship Project (SNC 786)

Project Location: The proposed project is located in the High Sierra Ranger District on the Sierra National Forest, in the Soaproot Management Unit, northeast of Cherry Flat and southwest of Grand Bluffs, south of State Route 168 and Dinkey Creek Road, approximately 5 miles south of Shaver Lake and approximately 30 miles northeast of Fresno, Fresno County, California. Township (T) 10 South (S), Range (R) 25 East (E), Sections 9, 10, 12, 15, 16, 22-24, 26, 29-33; T11S R25E Sections 3-8; T10S R24E Sections 24 and 25; and T10S R26E Section 18, Mount Diablo Base and Meridian. Latitude / Longitude: 37.01955 / -119.264145.

Date: March 13, 2014

Project Applicant: United States Forest Service, Sierra National Forest, High Sierra Ranger District

Lead Agency: Sierra Nevada Conservancy

Contact Person: Matthew Daley, Senior Grants Analyst, Sierra Nevada Conservancy, (530) 823-4698

Project Description: The High Sierra Ranger District is requesting approximately \$350,000 in funding from the Sierra Nevada Conservancy's Proposition 84 Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Grant Program to reduce hazardous fuels and restore ecological components in the Soaproot Stewardship Project area in the Sierra National Forest. This project would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth.

The proposed project includes restoring key features of diverse, fire-adapted forests, including heterogeneity at multiple scales, reduced surface and ladder fuels, improved watershed resilience and function, and improve habitats for sensitive wildlife and botanical species within the Soaproot Stewardship Project. Vegetative treatments would be applied to approximately 1,035 acres of an approximately 7,120-acre project area involving a combination biomass removal, tractor and grapple piling, and pile burning treatment methods. The project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest. Refer to Section 2.0, below, for a detailed project description.

Declaration: The Sierra Nevada Conservancy has determined that there is no substantial evidence that the above project, as mitigated, may have a significant effect on the environment and adopts a Mitigated Negative Declaration. The determination is based on the attached initial study and the following findings:

- a) *The project will not degrade environmental quality, substantially reduce habitat, cause a wildlife population to drop below self-sustaining levels, reduce the number or restrict the range of special-status species, or eliminate important examples of California history or prehistory.*
- b) *The project does not have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.*
- c) *The project will not have impacts that are individually limited, but cumulatively considerable.*
- d) *The project will not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.*
- e) *No substantial evidence exists that the project will have a negative or adverse effect on the environment.*

- f) *The project incorporates mitigation measures identified in the initial study and the Soaproot Restoration Project Environmental Assessment/Finding of No Significant Impact prepared by the High Sierra Ranger District of the Sierra National Forest.*
- g) *This mitigated negative declaration reflects the independent judgment of the lead agency.*

Submit questions to:

Matthew Daley

Senior Grants Analyst

Sierra Nevada Conservancy

11521 Blocker Drive, Suite 205

Auburn, CA 95603

(530) 823-4698

Matthew.Daley@sierranevada.ca.gov



Jim Branham, Executive Officer

(530) 823-4670

Phone #

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1.0 INTRODUCTION

1.1 PROJECT INFORMATION

1. Project Title:

Soaproot Stewardship Project (SNC 786)

2. Lead Agency Name and Address:

Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, CA 95603

3. Contact Person and Phone Number:

Matthew Daley, Program Coordinator (530) 823-4698

4. Project Location:

The proposed project is located in the High Sierra Ranger District on the Sierra National Forest, in the Soaproot Management Unit, northeast of Cherry Flat and southwest of Grand Bluffs, south of State Route 168 and Dinkey Creek Road, approximately 5 miles south of Shaver Lake and approximately 30 miles northeast of Fresno, Fresno County, California. Township (T) 10 South (S), Range (R) 25 East (E), Sections 9, 10, 12, 15, 16, 22-24, 26, 29-33; T11S R25E Sections 3-8; T10S R24E Sections 24 and 25; and T10S R26E Section 18, Mount Diablo Base and Meridian. Latitude / Longitude: 37.01955 / -119.264145.

5. Project Sponsor's Name and Address:

United States Forest Service
Sierra National Forest, High Sierra Ranger District
P.O. Box 559
Prather, CA 93651

6. General Plan Designation:

Sierra North Regional Plan Area: Public Lands

7. Zoning:

RC40 - Resource Conservation; adjacent to TPZ – Timberland Preserve and AE 40 – Exclusive Agriculture

8. Description of Project:

The High Sierra Ranger District is requesting approximately \$350,000 in funding from the Sierra Nevada Conservancy's Proposition 84 Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Grant Program to reduce hazardous fuels and restore ecological components in the Soaproot Stewardship Project area in the Sierra National Forest. This proposed project would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth.

The proposed project includes activities that will ultimately aid in restoring key features of diverse, fire-adapted forests, including heterogeneity at multiple scales, reduced surface and ladder fuels, improved watershed resilience and function, and improve habitats for sensitive wildlife and botanical species within the Soaproot Stewardship Project. Vegetative treatments

would be applied to approximately 1,035 acres of an approximately 7,120-acre project area involving a combination of biomass removal, tractor and grapple piling, and pile burning treatment methods. The proposed project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest. Refer to Section 2.0, below, for a detailed project description.

9. Surrounding Land Uses and Setting:

The proposed project is within the Sierra National Forest. The proposed project is entirely in the wildland urban intermix area where human habitation is mixed within areas of flammable wildland vegetation that extends out from private developed land into land under private, state, and federal jurisdictions. Nearby communities include Shaver Lake, Ockenden, Pineridge, Cressmans, and Dinkey Creek. Several creeks are within the project area as well.

10. Other public agencies whose approval is required:

High Sierra Ranger District, Sierra National Forest, United States Forest Service*
California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement)**
California Regional Water Quality Control Board**

San Joaquin Valley Air Pollution Control District (burn approval)

*Approved the Environmental Assessment/Finding of No Significant Impact (NEPA)

**As required for riparian, watershed, and stream crossing activities

1.2 PROJECT BACKGROUND AND PREVIOUS ENVIRONMENTAL DOCUMENTATION

The High Sierra Ranger District of the Sierra National Forest acted as Lead Agency under the National Environmental Policy Act (NEPA) in July 2012 and prepared an Environmental Assessment (EA) and adopted a Finding of No Significant Impact (FONSI) in September 2012. This Initial Study and Draft Mitigated Negative Declaration (IS/MND) relies on the *Soaproot Restoration Project Environmental Assessment/Finding of No Significant Impact* and the following related technical studies:

- Botanical Resources Biological Evaluation and Biological Assessment and Noxious Weed Risk Assessment for the Soap Root Restoration Project (no date)
- Riparian Conservation Objectives Consistency Report – Soaproot Restoration Project (August 2012)
- Aquatic Species Biological Assessment and Biological Evaluation for the Soaproot Project (May 2012)
- Migratory Landbird Conservation on the Sierra National Forest (June 2012)
- Biological Assessment and Biological Evaluation for Terrestrial Wildlife for the Soaproot Restoration Project (June 2012)
- Management Indicator Species Report for Soaproot Restoration Project (May 2012)
- Cultural Resource Management of the Soaproot Restoration Project, Archaeological Reconnaissance Report R2012051552001 (April 2012)
- Cumulative Watershed Effect Analysis, Soaproot Project – Baseline and Detailed CWE Analysis FSH 2509.22 (May 2012)
- Water Resources Specialist Report (May 2012)
- Air Quality Specialist Report, Soaproot Restoration Project (June 2012)

2.0 PROJECT DESCRIPTION

The Soaproot Stewardship Project (proposed project) is located in the High Sierra Ranger District on the Sierra National Forest, in the Soaproot Management Unit, northeast of Cherry Flat and southwest of Grand Bluffs, south of State Route 168 and Dinkey Creek Road, approximately 5 miles south of Shaver Lake and approximately 30 miles northeast of Fresno, Fresno County, California (Figure 2-1). In the proposed project, vegetative treatments would occur on approximately 1,035 acres of an approximately 7,120-acre project area to reduce hazardous fuels. This involves a combination of biomass removal, tractor and grapple piling, and prescribed fire treatment methods in stands and plantations to accomplish the project objectives. There are no treatments proposed within Bretz Campground. Within the project boundary, there would be stands with no treatment and others that include multiple treatments to meet the goals and desired conditions of the proposed project.

While the High Sierra Ranger District analyzed a larger project (Soaproot Restoration Project) within the NEPA EA/FONSI, the proposed project is smaller in size and does not include as many treatments. Only those vegetative treatments that are identified in Table 2-1 are discussed in further detail below. Appendix A provides design criteria for the larger Soaproot Restoration Project (High Sierra Ranger District, September 2012); however, only the criteria related to the proposed project, as defined by the Sierra Nevada Conservancy (SNC) for the purposes of the California Environmental Quality Act (CEQA), would be applied.

Table 2-1. Summary Totals of Proposed Treatments (in acres)

Treatment	Acres
Biomass Removal	262.3
Tractor Pile	470.5
Grapple Pile	305

Vegetative treatments are designed to decrease fuel loads and stand densities in order to restore the landscape to a healthy, diverse, fire-resilient one that would aid in disrupting severe wildfires that may occur around the wildland urban intermix. This would be accomplished by reducing surface and ladder fuels, promoting and maintaining heterogeneity at multiple scales, maintaining and improving habitat for sensitive wildlife species, improving watershed function and resilience, and restoring native species composition.

2.1 TREATMENTS

Vegetative treatments would reduce tree and brush density in several areas within the project boundary, creating a situation where wildfire suppressions has greater probability of success should a wildfire occur. The proposed project would involve biomass thinning treatments as well as tractor and grapple piling of slash, to promote heterogeneity and allocate growing space consistent with historical stand structures. The prescriptions are designed to maintain the suitability of sensitive species habitat, while remaining consistent with fuels and fire objectives. Vegetation treatments proposed would occur as three different prescriptions and are based on whether they occur inside of fisher den buffers and spotted owl protective activity centers (PACs), outside of these areas, or within plantations. The prescriptions are described below.

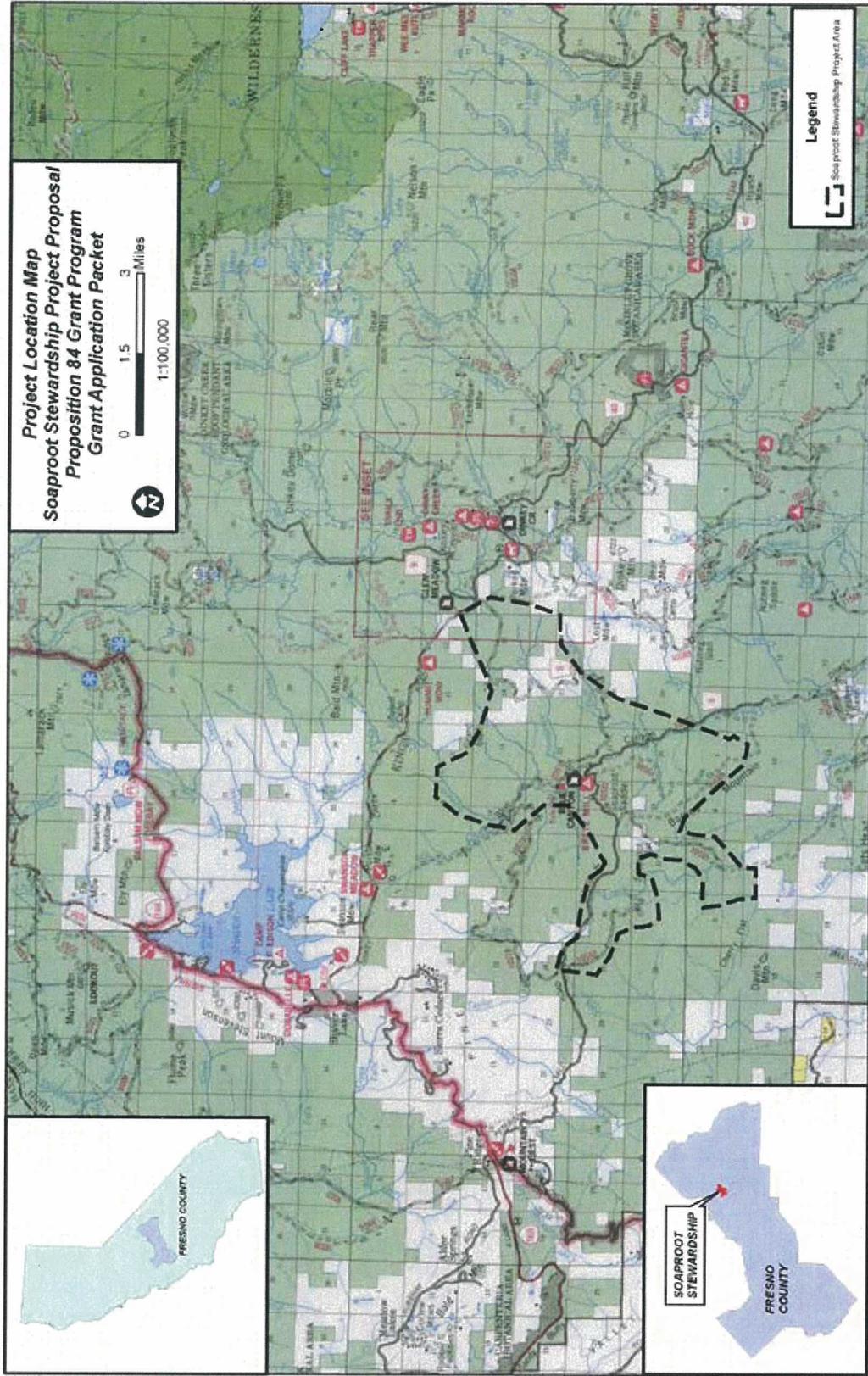


Figure 2-1. Project Vicinity and Location Map
 (Source: High Sierra Ranger District)

2.1.1 Biomass Thinning Prescription

Small trees (4 to 9.9 inches DBH) would be thinned to a spacing of 20 feet and the trees yarded to a central landing, within those areas identified for vegetative treatments. There are approximately three stands with plantations that would also have small trees thinned to a spacing of 20 feet to accelerate development of large trees and meet ecological restoration objectives. This material would also be removed to landing and either removed or burned. Mechanized equipment such as masticators or mechanical harvesters (i.e., feller buncher and rubber-tired skidder) would be utilized.

Current and past fisher den sites consisting of the highest quality habitat would require a 700 acre buffer. Designation of den buffers would be achieved using new information that comes from current research up until a contract for the proposed project would be awarded. After that point, new information would still be collected and utilized but the prescription in the buffers would not change for this proposed project (High Sierra Ranger District, September 2012).

2.1.2 Fuel Prescription – Tractor and Grapple Pile Slash

In stands where the level of dead and down woody debris exceed the fuels objectives of 10 to 15 tons per acre, fuels reduction treatments would be used to lower the volume of flammable brush and slash across the project area. The fuels prescriptions involve the manual and mechanical rearrangement of fuels created from harvesting activities or natural processes. These activities would occur after proposed vegetation treatments are completed and would be followed by prescribed fire or another method to reduce the fuels (High Sierra Ranger District, September 2012).

Dead and down woody material would be mechanically piled depending on the area and would be later burned. Tractor piles of fuels in treatment areas would be created using a brush rake attached to a tracked vehicle. Areas of dense green brush would be tractor piled as a separate treatment. Piles would be later burned with forest service personnel. In watersheds where cumulative watershed effects (CWEs)¹ are a concern, grapple piling would occur in riparian conservation areas (RCAs)² to minimize ground disturbance, especially on slopes greater than 25 percent.

2.1.3 Prescribed Fire – Pile Burns

Ecosystem strategies include emphasis of the use of prescribed fire both as a fuel treatment and as a tool for restoring natural processes. Four prescribed fire methods would be used: burn piles, jackpot burn, underburn, and broadcast burn. If determined appropriate by the High Sierra Ranger District, biomass would be removed to an off-site location or would be burned. Piles generated from mechanical equipment (tractor and grapple) would be burned within the treatment areas or on landings. Therefore, of the four prescribed fire methods, the proposed project would conduct pile burns.

The proposed project would include pile burning, while the larger Soaproot Restoration Project would conduct prescribed burns. All burns would be conducted in accordance with Title 17 of the California Code of Regulations (CCR). The project proponent, High Sierra Ranger District, would submit a smoke management plan to the San Joaquin Valley Air Pollution Control District (SJVAPCD) and: 1) receive a permit to burn, 2) receive authorization to burn on a given day, and 3) maintain communication with the local air district and report on the status of the burn until it is concluded (High Sierra Ranger District, June 2012).

¹ CWEs are watersheds that may respond to disturbances when they reach a Threshold of Concern (TOC). Within the project boundary, 12 of 15 subdrainages exceed their TOC (High Sierra Ranger District, May 2012).

² RCAs are delineated around perennially and seasonally flowing streams and special aquatic features. They extend 300 feet from perennial features and 150 feet from seasonal areas (Refer to Appendix A for further detail).

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

DETERMINATION: (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Jim Branham, Executive Officer

3/13/14

Date

4.0 EVALUATION OF ENVIRONMENTAL IMPACTS:

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

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

a, c.) **Less Than Significant.** The proposed project area is visible primarily from State Route (SR) 168, Dinkey Road, and Bretz Campground. Tree stumps would be cut to a maximum of six inch heights from the uphill side or as low as possible. Where feasible, burn piles would be located in areas where they would not be highly visible from private property, Peterson Mill Road and Dinkey Creek Road, SR-168, Forest Service (FS) roads 10S01, 10S17, and 10S18, and Bretz Campground. If a burn pile is not burned to 90 percent consumption, the remnant slash would be scattered throughout the site. Where feasible, landings would be located in areas where they would not be highly visible and would be minimized in size and restricted to existing openings.

There would be no impacts to scenery from SR-168 or Dinkey Creek Road, as the proposed project would not be visible due to the “walls” of trees and land forms that screen views beyond the immediate foreground. Given the nature of the proposed project, to enhance forest health, and the specific project design criteria outlined by the High Sierra Ranger District, the proposed project would have a less than significant impact on surrounding roadways, private property, and Bretz Campground. Proposed project impacts are considered less than significant. No mitigation is required.

b.) **Less Than Significant.** As part of the proposed project activities, buffer areas would be set up around rock outcroppings and cultural resource sites. A 100-foot buffer of 100 percent soil cover would be left below large rock outcrops to maintain erosion control as well as their aesthetic integrity. No ground disturbing activities would occur within cultural resource sites and any resources identified through consultation with Native American tribes, individuals, and other interested parties would be protected through avoidance. Therefore, the proposed project would have a less than significant impact on scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings. No mitigation is required.

d.) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project would not introduce a new source of light or glare into the region. Therefore, no impact would occur. No mitigation is required.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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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 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a-e.) **No Impact.** The proposed project site is within the Sierra National Forest. The proposed project site does not contain Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or active agricultural operations. The project involves forest land, but would not involve the loss of any forest land. The proposed project would benefit the forest as it would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project does not include any changes that could result in conversion of any farmland to a non-agricultural use or forest land to non-forest land use. Accordingly, there would be no impact related to agricultural or forest resources. No mitigation is required.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a, b, d, e) **Less Than Significant.** The proposed project is located within the San Joaquin Valley air basin within the jurisdiction of the San Joaquin Valley Unified Air Pollution Control District (SJVAPCD). The Fresno Metropolitan area, the communities of Shaver Lake, Tollhouse, and the Dinkey Creek Recreation Area, schools, airports and recreation sites are considered smoke sensitive receptors where smoke and air pollutants can adversely affect public health, safety and welfare. Table 4-1 identifies sensitive receptor areas within 10 miles of the project area. These areas could be affected by smoke if weather patterns produce a stable air mass and smoke is unable to vent into the upper atmosphere.

Table 4-1. Sensitive Receptors Identified within 10 Miles of the Soaproot Project*

Sensitive Receptor Type	Location
Towns, Communities	Peterson Mill, Pineridge, Cressman Road, Shaver Springs, Shaver Lake, Sierra Cedars.
Recreation Areas	Blue Canyon, Haslett Basin, Dinkey Creek Recreation Area, Shaver Lake Recreation Area, McKinley Grove.
Campgrounds	Bretz Mill, Swanson Meadow, Dorabella, Camp Edison, Dinkey Creek, Sawmill Flat, Camp Fresno, and McKinley Grove.
FS Work Center/Ranger Station	Blue Canyon Work Center, Mountain Rest Station, Dinkey Creek Ranger Station, Glen Meadow Work Center, and Dinkey Creek Work Center.
Roads	State Highway 168, Forest Service and County Roads
Class I Federal areas	See Table 1 for Class I areas
Other	Private lands within and adjacent to the project area

Source: High Sierra Ranger District, *Air Quality Specialist Report*, June 2012.

* Distances are as identified for the larger Soaproot Project as identified for NEPA by the High Sierra Ranger District.

Direct Impacts: Prescribed burns (pile burns) would occur as part of the proposed project. Burns are conducted on authorized burn days only, in consultation with the SJVAPCD. Since smoke is made up of inhalable particulates (smoke particles that measure less than ten microns in size [PM₁₀], and of less than 2.5 microns in size [PM_{2.5}]) and ozone are public health hazards; prescribed burns (pile burns) would be planned during periods of unstable air, which would allow for proper ventilation. The High Sierra Ranger District would obtain a burn permit prior to pile burns, as discussed below, and would coordinate with SJVAPCD for burn activities. Burn activities would be implemented under optimum conditions using Best Available Control Measures (BACMs) to prevent smoke concentrations from affecting local communities (High Sierra Range District, June 2012). This impact would be less than significant and no mitigation measures are required.

The objective of pile burning would be to reduce fuel loadings while protecting the residual overstory trees from damage caused by heat and flames. Pile burning could produce more particulate matter per acre than understory burning because the standing biomass would be cut and piled producing higher fuel loads. However, piled material is allowed to cure and can be ignited with lower fuel moistures, which ensures complete and efficient consumption and less particulate matter being produced. If fuel loading does not meet the desired condition after the biomass reduction is complete, then an understory burn is prescribed. Understory burning would not be a part of the proposed project. The proposed project includes pile burn activities that would occur in the fall of 2014. Pile burning would only be allowed with a burn permit from the SJVAPCD, obtained by the High Sierra Ranger District, and would only occur on designated burn days. This pile burning would not interfere with the strategies employed to attain the National Ambient Air Quality Standards. The High Sierra Ranger District would be required to maintain burn ignitions and acres within rules and guidelines developed by the SJVAPCD, as provided by the California Air Resources Board (CARB) (High Sierra Range District, June 2012).

In addition, the use of the existing unpaved Forest Service roads could potentially generate dust. The project area is above 3,000 feet in elevation and is exempt from Regulation VIII, Rule 8011 General Requirements, though dust abatement is still required by the Forest Service. Impacts are considered less than significant and no mitigation measures are required.

Mechanical equipment would be used for vegetation removal, thinning, and piling activities. Equipment hours are based on average production rates from similar projects on the High Sierra Ranger District. Most of the material would be thinned by chainsaw or mechanical harvester and skidded. Piling of activity created slash and brush would be with a track type tractor. The proposed project would include equipment such as wheeled skidders and loaders, and heavy duty diesel powered highway truck and track type dozer or dozer with grapple head. Exhaust hydrocarbons (EH) and pollutant levels produced from thinning activities are lower than historical levels of logging and similar activities for the Sierra National Forest. Historical timber harvesting and thinning operations were at all-time highs in 1987 with 154 million board feet of timber harvested. This proposed project would thin approximately 0.5 percent of that historical level. Therefore, exhaust from proposed project activity equipment would have a less than significant impact on air quality. No mitigation measures are required.

Indirect Impacts: These areas could be affected by smoke if weather patterns produce a stable air mass and smoke is unable to vent into the upper atmosphere. Since PM₁₀ and ozone are public health hazards, prescribed burns (i.e., pile burns) would be planned during periods of unstable air, which would allow for proper ventilation of smoke and temperatures less than 95 degrees Fahrenheit (°F). No prescribed underburns would occur as a part of this proposed project. All prescribed fire activities are coordinated through the High Sierra Ranger District with SJVAPCD and would be implemented under optimum conditions using best available control measures to

prevent smoke concentrations from affecting local communities. Thus impacts are considered less than significant and no mitigation measures are required.

- c.) **Less Than Significant.** The combination of the proposed project with past, present and reasonably foreseeable projects such as the Southern California Edison Company's forestry and prescribed fire program, the Keola project, cattle grazing, off-highway vehicle recreation and ranching use, and private land management activities and timber sales could result in cumulative impacts. However, all projects are required to comply with SJVAPCD rules and guidelines. In addition, all prescribed fire activities are coordinated with SJVAPCD and would be implemented under optimum conditions using best available control measures to prevent smoke concentrations from affecting local communities. Therefore, cumulative impacts are considered less than significant and no mitigation measures are required.

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

a.) **Less Than Significant.** The Sierra National Forest contains many special status wildlife and plant species. However, proposed project activities have been designed to minimize any impacts to special status species. Specific design criteria are provided in Appendix A, and include prohibiting vegetation treatments: 1) within 0.25-mile of a Northern goshawk nest site between February 15 and September 15; 2) within 0.25-mile of a great grey owl nest sites between March 1 and August 15; 3) within 0.25-mile of California spotted owl activity centers between March 1 and August 15; and 4) set up a 700-acre buffer around Pacific fisher den sites between March 1 and June 30. Pre-treatment surveys would be conducted for special status wildlife species, including nesting birds, and appropriate buffers would be established if necessary, based on consultation with the U.S. Forest Service biologists and the appropriate state or federal agencies. Proposed project activities near riparian areas would maintain an 80 percent canopy cover in the Streamside Management Zones (SMZ) and 60 percent cover in riparian conservation areas (RCAs) in order to maintain appropriate water temperatures for aquatic species. Pre-treatment surveys would be conducted for special status plant species and any populations would be flagged and avoided during proposed project activities. Design criteria and BMPs identified to help reduce erosion and runoff would further reduce indirect impacts to any special status plant species in the project area. With the proposed project design criteria (refer to Appendix A) and the BMPs (refer to Appendix B), the

proposed project would have a less than significant impact on special status wildlife and plant species. No mitigation measures are required.

- b, c.) **Less Than Significant.** The proposed project would not include watershed restoration. Proposed project activities, including the design criteria provided in Appendix A, would occur within riparian areas. Vegetation treatments would include biomass thinning and tractor and grapple piling. In watersheds where cumulative watershed effects (CWEs) are a concern, grapple piling, rather than tractor use, would occur in RCAs to minimize ground disturbance, especially on slopes greater than 25 percent. Pile burning would occur as a part of the proposed project.

Sedimentation could be slightly increased in some subdrainages in the short term; however, treatments would follow BMPs (refer to Appendix B) and the design criteria (refer to Appendix A). However, upon proposed project completion, it is anticipated that there would be a reduction in sediment delivery that could reduce fine sediment within the creeks in the project area. Burning prescriptions would be designed to minimize riparian disturbance. The amount of high soil burn severity is not expected to be concentrated in the RCAs, SMZs, and riparian management areas (RMAs) because they would not be directly lit and they tend to hold more moisture than surrounding areas. Groundcover treatments would occur; however, the remaining groundcover would be 50 percent.

While riparian habitat and riparian areas may have temporary, indirect impacts during vegetative treatment activities, the proposed project would improve riparian habitat health, improve water quality, reduce sedimentation, and improve the ultimate health of the watershed. Therefore, the proposed project would have a less than significant impact on riparian areas, riparian habitat and watersheds. No mitigation measures are necessary.

- d.) **Less Than Significant.** The proposed project would include noise during treatment activities. However, snags and woody debris, riparian buffers, and maintenance of canopy closures, as outlined in the project description and the design criteria (refer to Appendix A), would minimize any impacts to migratory species. Therefore, the proposed project would have a less than significant impact on migratory species. No mitigation measures are required.
- e-f.) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project would not conflict with policies or ordinances protecting biological resources nor would it conflict with any adopted conservation plans. The proposed project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest. No impacts to recreation would occur. No mitigation measures are required.

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

a-d.) **Less Than Significant With Mitigation.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. These activities could result in ground disturbance that could impact cultural and paleontological resources; however, procedures from the *First Amended Regional Programmatic Agreement Among the USDA Forest Service, Pacific Southwest Region, California State Historic Preservation Officer, and Advisory Council on Historic Preservation Regarding the Process for Compliance with Section 106 of the National Historic Preservation Act for Undertakings on the National Forests of the Pacific Southwest Region* (Regional PA) would be utilized for the protection and management of cultural resources within the project area.

Cultural resources have been identified within the project area. Archaeological resources would be excluded from proposed project activities that could result in ground disturbance within the site boundaries (i.e., the use of ground-based mechanical equipment and piling). Sites would be avoided by flagging site boundaries and allowing only hand treatments near the boundaries. Vegetation to be burned would not be piled within the boundaries of a historic property or other cultural resource site. Any equipment to be used within cultural resource site boundaries (i.e., tracked equipment, rubber-tired equipment, or off-site equipment) would be approved by the High Sierra Ranger District's heritage resource manager (High Sierra Ranger District, April 2012).

In the event that an inadvertent effect of new discovery occurs during project implementation, the High Sierra Ranger District would comply with the stipulations of the Regional PA. Impacts as a result of the proposed project would be less than significant; however, there is the potential to disturb previously unidentified resources or unknown human remains outside of a designated cemetery. Therefore, mitigation is required.

Ground disturbing activities would occur surficially with mechanical thinning. It is not anticipated that paleontological resources would be disturbed as a result of the proposed project. As part of the proposed project activities, buffer areas would be set up around rock outcroppings and cultural resource sites. A 100-foot buffer of 100 percent soil cover would be left below large rock outcrops. Thus, the proposed project would have a less than significant impact to paleontological resources or rock outcrop; however, there is the potential to disturb previously unidentified paleontological resources. Therefore, mitigation is required.

Mitigation Measures

CULT-1 If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the Fresno County coroner. All reports, correspondence, and determinations regarding the discovery of human remains on the project site shall be submitted to the Sierra Nevada Conservancy and the High Sierra Ranger District.

According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and willful disturbance of human remains is a felony (Section 7052).

CULT-2 During any ground disturbance activities, if paleontological resources are encountered, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the *Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County regarding any discoveries of paleontological resources.

If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Sierra Nevada Conservancy and the High Sierra Ranger District.

CULT-3 If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, can evaluate the significance of the find and make recommendations. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified professional archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations may be required to mitigate adverse impacts from project implementation. These additional studies may include avoidance, testing, and evaluation or data recovery excavation.

If a potentially-eligible resource is encountered, then the qualified professional archaeologist, the Sierra Nevada Conservancy, and the High Sierra Ranger District shall arrange for either

1) total avoidance of the resource or 2) test excavations to evaluate eligibility and, if eligible, total data recovery. The determination shall be formally documented in writing and submitted to the Sierra Nevada Conservancy and High Sierra Ranger District as verification that the provisions for managing unanticipated discoveries have been met.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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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. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iv) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a, d, e) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project would not expose people or structures to potential substantial adverse effects involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides. While the proposed project may remove some understory ladder fuel, the proposed project would ultimately improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest. Therefore, people residing, working, or recreating in the Sierra National Forest would not be exposed to potential seismic activity or landslides beyond the existing threat. No impacts to recreation would occur. No mitigation measures are required.

b-c.) **Less Than Significant.** The proposed project would include ground disturbing activities and the potential for soil erosion or loss of topsoil. The proposed project would include a 100-foot buffer of 100 percent soil cover around, and below, large rock outcrops to avoid potential runoff generated by these areas that can cause accelerated erosion on soils downslope. Mechanical equipment operations would be conducted when the soil is sufficiently dry in the top 12 inches to prevent unacceptable loss of soil porosity (soil compaction). Under moist soil condition, field checking by a soil scientist would be done to determine if operations could continue. Mechanical operations would be limited where slopes exceed 35 percent. Fifty (50) percent soil cover would be maintained in all areas. Where shrub species predominate, they would be crushed before piling to create small woody fragments left scattered over the site for soil cover and erosion protection. Any

tractor piling that would occur in CWEs would be limited and a grapple piler would be used, especially on slopes greater than 25 percent.

Given the activities included in the proposed project, as summarized above, the proposed project would have a less than significant impact on the erosion. No mitigation measures are required.

In addition, given that the proposed project would provide for a healthier forest and includes erosion controls for slopes greater than 25 percent, the proposed project would not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. The proposed project would have a less than significant impact in this regard and no mitigation measures are required.

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

a-b.) **Less Than Significant.** Projected climate change impacts include temperature increases, sea level rise, changes in timing, location and quantity of precipitation and the increased frequency of extreme weather events such as heat waves, droughts and floods. The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. Prescribed burns (pile burning) would occur as part of the proposed project. Prescribed burns are conducted on days when atmospheric ventilation transports smoke and pollutants away from the San Joaquin Valley and pollutants are not normally a problem. Burns are conducted on authorized burn days only in consultation with the SJVAPCD.

The proposed project would use mechanized equipment such as masticators or mechanical harvesters (i.e., feller buncher and rubber-tired skidder). Changes in combustion efficiency change the amount of CO₂ release per ton of fuel (High Sierra Ranger District, June 2012). The larger Soaproot Restoration Project underburn activities are estimated to produce 9,460 tons of CO₂ emissions, or 2.21x10⁻⁵ percent of California's 2007 statewide GHG emissions total and 2020 GHG emissions limit (High Sierra Ranger District, June 2012). However, the proposed project would include only pile burning, which is one of four burn prescriptions identified in the Soaproot Restoration Project. In addition, the proposed project would improve forest health and reduce fuel load, which would reduce the risk of wildfire, thus reducing the release of additional CO₂ as a result of severe wildfire. While the proposed project would increase CO₂ emissions in the near-term, emissions overall would be reduced because wildfire severity would be reduced. Impacts are considered less than significant. No mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a-c.) **Less Than Significant.** The proposed project would not include the use of hazardous materials. The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project would not transport, use, or dispose of hazardous materials. The proposed project would not release hazardous materials into the environment. The proposed project would result in equipment emissions as well as particulate matter from proposed project activities; however, the project area is not located within 0.25 mile of a school. In addition, the High Sierra Ranger District would be required to provide appropriate dust control measures, obtain a burn permit, and burn on days when atmospheric ventilation transports smoke and pollutants away from the San Joaquin Valley and pollutants are not normally a problem. Burns would be conducted on authorized burn days only in consultation with the SJVAPCD. The proposed project would have a less than significant impact as related to hazardous materials. No mitigation measures are required.

d-g.) **No Impact.** The proposed project is located within the Sierra National Forest. It is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, nor would it create a hazard to the public. The proposed project is not within an airport or private airstrip plan area. The nearest public airport is the Fresno Yosemite International Airport in Fresno, approximately 30 miles southwest.

The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest. Therefore, the proposed project area would not interfere with air traffic circulation nor would it interfere with an adopted emergency response plan or an emergency evacuation plan. The proposed project would thus, have no impact in this regard. No mitigation measures are required.

h.) **Less Than Significant.** The proposed project is located within a Wildland Urban Intermix area. In general, wildfire ignitions are a mix of human caused and lightning. Dead fuel moistures can indicate a wildfire's ability to spread. Wildfires usually spread in a continuous flaming front. When the 10-hour fuel moisture (measured in dead fuels that are ¼ to 1 ¼ inches in diameter) drops below a rating of six, wind can throw embers ahead of the flaming front and start multiple small fires called spot fires. Generally the higher the wind speed, the further the spot fires occur from the main fire. As these spot fires burn together they cause the speed and intensity of the fire to increase dramatically. Multiple spot fires are an indication of extreme fire behavior. It is not uncommon for these conditions to exist during the height of the fire season every year (High Sierra Ranger District, September 2012).

Prescribed fire operations, in the form of slash pile burning, can usually start in late October and may continue until precipitation makes the fuels too wet to ignite, usually sometime in November, but as late as January in extremely dry years. Prescribed fire operations in the fall months face three obstacles:

- The demand for fire crews to remain in a state of readiness for the southern California Santa Ana fire season precludes long-term commitment of fire crews to prescribed fires.
- Without adequate precipitation, fuel moisture remains too low to meet prescribed fire objectives or once the rainfall starts, it comes too frequently to allow fuels to dry sufficiently enough to carry fire.
- Fall weather patterns in the San Joaquin Valley Air Basin create poor air movement, which traps smoke and other pollutants in the populated valley thus causing unhealthy conditions. Adequate air movement that would disburse smoke from prescribed fires usually only occurs during weather frontal passages. These frontal passages sometimes provide small windows of opportunity to conduct prescribed fire operations.

Because of these factors, fall prescribed burns are typically short in duration and easy to managed (High Sierra Ranger District, September 2012).

Altered fire frequencies caused by a century of fire suppression in ponderosa pine forests characterized by a frequent low-intensity fire regime, coupled with prolonged drought and epidemic levels of insects and diseases, have coincided to produce extensive forest mortality and the eventual increase in fuels and has contributed to greater stand densities and an increase of crown fire potential. Fuel loading within the project boundary has also increased due to winter storm damage in 2009/2010 and 2010/2011. The fire regime is now shifting towards one

of infrequent higher severity fires due to the increase in fuel loads which has increased the potential for crown fire. Within the project area, there is little ground that has seen enough fuel reduction treatments to effectively reduce surface fuels to a light fuel load that would prevent passive and active crown fire. (High Sierra Ranger District, September 2012).

The direct effect of the proposed project is the reduction of high-severity and high-intensity fires within the treated stands. The combination of treatment strategies (mechanical and prescribed fire) that include surface, ladder and crown fuel treatments reduce surface flame lengths, moderate fire severity across the landscape, and reduce the potential for active and passive crown fire within the project area. Removal of trees can reduce the potential for crown fires but this is dependent on surface fuel loading. Reasons for removal of trees up to 30 inches DBH is generally to reduce stand density and bug induced mortality for forest health. These treatments may have a desired effect on fire behavior especially on steep slopes and in places with extenuating topography or road system circumstances. In addition, reducing flame lengths through the proposed project would create more resilient conditions where fire acts in a role closer to its natural disturbance process (High Sierra Ranger District, September 2012).

The wildland urban intermix is always given priority to suppression activities. For fire suppression efforts, the effect of reducing hazard fuels in the wildland urban intermix is a reduced number of suppression resources needed for structure protection, which allows the resources to be redeployed to perimeter control, thus reducing fire size if fire behavior is controllable. Smaller fires require fewer firefighters, which in turn reduces the number of firefighters exposed to hazards. In addition, smaller fires expose fewer numbers of the public to the hazards of wildfires.

All pile fire activities would be coordinated with SJVAPCD and would be implemented under optimum conditions using best available control measures to prevent smoke concentrations from affecting local communities. The proposed project would only burn piles that have a good base to keep the pile from toppling and would have enough distance between piles to prevent premature ignition during burning. The proposed project would ignite piles with drip torches, except within riparian conservation areas. Controls are set forth with the design of the proposed project, as well as requirements from the Sierra National Forest and the SJVAPCD. Therefore, the threat that the burn piles would burn beyond the delineated area is low.

An indirect effect of the proposed project is the increased fire resilience of the landscape, which is the ability of the forest to withstand the effects of wildfires (passive and active crown fire) under 90th percentile weather conditions (High Sierra Ranger District, September 2012).

Given the proposed project's outcome in reducing ladder fuel, fire intensity, and flame height, and increasing fire resilient conditions to the project area, the proposed project would have a less than significant impact on wildfires. No mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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IX. HYDROLOGY AND WATER QUALITY: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a, c, d, f.) **Less Than Significant.** The proposed project would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project includes biomass thinning, tractor and grapple piling, and pile burning. These activities include ground disturbing activities, which could result in an increase in sediment within runoff. However, the proposed project would include a 100-foot buffer of 100 percent soil cover around, and below, large rock outcrops to avoid potential runoff generated by these areas that can cause accelerated erosion on soils downslope. Any tractor piling that would occur in CWEs would be limited and a grapple piler would be used, especially on slopes greater than 25 percent. The proposed activities would help to reduce runoff and erosion in the long-term, which would ultimately improve water quality. The main water quality concern in the project area is sand-sized sediment that can be derived from roads, hillslope disturbances, or in-stream erosion.

Proposed project activities could indirectly impact water quality, as discussed above; however, the proposed project activities and design criteria provided in Appendix A would ensure a less than significant impact during project implementation. Therefore, the impacts to water quality would be less than significant. No mitigation measures are required.

- b.) **No Impact.** The proposed project would ultimately improve watershed, riparian and forest health. No water supply would be required for the proposed project. Thus, the proposed project would not impede groundwater recharge, as vegetative treatments would not include the introduction of impervious surfaces. There would be no impact to water supply as a result of the proposed project. No mitigation measures are required.
- e.) **No Impact.** The proposed project would not result in an increase in runoff and would not contribute to polluted runoff. The proposed project is located within the Sierra National Forest; there is not stormwater drainage system within the project area. Ground disturbing activities would result from the proposed project, however, design criteria (refer to Appendix A) and BMPs (refer to Appendix B), would minimize the potential of increased sediment in runoff, as discussed above. The proposed project would not impact runoff amount or runoff water quality. No mitigation measures are required.
- g-j.) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project would not introduce houses or businesses to the area. Therefore, the proposed project would not introduce people, houses, or other structures to a 100-year flood hazard area, would not redirect a 100-year flood event, would not introduce people or structures to an area that would flood, including flooding from a failed dam or levee, and would not introduce people or structures to an area that would experience inundation from seiche or tsunami. In addition, the threat of a mudflow would not be any greater that the existing conditions. Therefore, the proposed project would have no impact in this regard. No mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-c.) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. No changes in land use designations or zoning would occur as a result of the proposed project. The proposed project would not physically divide an established community. The proposed project would enhance the forest healthy, thus the proposed project would not conflict with any conservation plans for the Sierra National Forest. No impact would occur as a result of the proposed project. No mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally- important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-b.) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. No changes in land use would occur as a result of this proposed project. Therefore the proposed project would not result in the loss of available known mineral resources. No impacts to mineral resources would occur as a result of the proposed project. No mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a, b, d.) **Less Than Significant.** The proposed project would increase noise levels temporarily during activities such as mechanical thinning and tractor and grapple piling. However, the design criteria for the proposed project, as outlined in Appendix A, would result in impacts that are less than significant. In addition, the anticipated mechanical equipment used for proposed project activities are not anticipated to result in excessive groundborne vibration levels. Many of the treatment sites are located away from any private land owners or campgrounds. Activities would be temporary in nature, as they would cease upon project completion. Design criteria (refer to Appendix A) include noise criteria, mainly with respect to disturbance of special status species. Therefore, the proposed project would have a less than significant impact. No mitigation measures are required.

c.) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. While temporary noise would occur as a result of the mechanical thinning and tractor and grapple piling, these noise increases would be temporary in nature and would cease upon project completion. Therefore, the proposed project would not permanently increase ambient noise levels above existing noise levels. No mitigation measures are required.

e, f.) **No Impact.** The proposed project is not located within an airport land use plan or in the vicinity of a private airstrip. The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project would not expose people to excessive noise levels as a result of the proximity to an airport or private airstrip. No impacts to recreation would occur. No mitigation measures are required.

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

a-c.) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. No changes in land uses would occur as a result of the proposed project. The proposed project does not include the development of new homes or businesses. The proposed project would not displace existing homes or people. There is one campground located in the project area; this campground would remain open during normal operating season. No impacts would occur as a result of the proposed project. No mitigation measures are required.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a.) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project would not result in an increase need for public services. While pile burning is an element of the proposed project, the High Sierra Ranger District would provide appropriate staff for these proposed project activities. Thus, the proposed project would not result in an increase need for fire protection. The project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest. No impacts to public services would occur. No mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a-b.) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project would not increase the use of existing neighborhood and regional parks, nor would it increase the use of the National Forest. The proposed project would not require the expansion or construction of recreational facilities. The project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest. No impacts to recreation would occur. No mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-f.) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. A temporary increase in traffic may occur while equipment is being move to the project area or out of the project area. However, because of the nature of the proposed project activities, it is not anticipated that the proposed project would conflict with applicable plans, ordinances, policy establishing measures, congestion management plans or programs, or policies or programs regarding alternative transportation (public transit, bicycles, or pedestrian facilities).

The proposed project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest. Thus, the proposed project would not impact air traffic patterns.

The proposed project includes vegetative treatments that would be applied to approximately 1,035 acres. No roadway construction or improvements would occur as a result of the proposed project. Therefore, the proposed project would not increase hazards due to design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). No mitigation measures are required.

The proposed project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest. This would improve emergency access to the Sierra National Forest in case of wildfire or other forest emergency. No impacts from the proposed project would occur. No mitigation measures are necessary.

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

a-g.) **No Impact.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project would not require wastewater treatment, water supply, or solid waste disposal, as the proposed project does not include utilities and service systems. The proposed project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest. No impacts to utilities and service systems would occur. No mitigation measures are required.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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XVIII. 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a.) **Less Than Significant.** The proposed project would include activities that would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The proposed project activities as described in Section 2.0, Project Description, as well as the design criteria provided in Appendix A and the BMPs listed in Appendix B would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest health. Temporary impacts would be less than significant. No mitigation measures are required.

b.) **Less Than Significant.** The proposed project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest health. While air quality and greenhouse gas emissions could result in cumulative impacts as a result of the proposed project, all projects are required to comply with SJVAPCD rules and guidelines. In addition, all prescribed fire activities are coordinated with SJVAPCD and would be implemented under optimum conditions using best available control measures to prevent smoke concentrations from affecting local communities. The proposed project would reduce the threat of severe wildfire, and, therefore, long term impacts would not be cumulatively considerable. Impacts are considered less than significant.

c.) **Less Than Significant.** The proposed project would improve forest health, reduce fuel loading and thus threat of wildfire, and maintain and enhance existing forest health. While smoke would occur during pile burns, overall impacts to human beings would be beneficial in nature, as wildfire threat and severity would be reduced as a result of the reduction in ladder fuels. Therefore, impacts would be less than significant.

5.0 RESPONSE TO COMMENTS

5.1 PURPOSE

As defined by Section 15050 of the California Environmental Quality Act (CEQA) Guidelines, the Sierra Nevada Conservancy (SNC) is serving as "Lead Agency," for preparation of the Mitigated Negative Declaration (MND) for the Soaproot Stewardship Project (proposed project). The Final MND presents the environmental information and analyses that have been prepared for the proposed project, including comments received addressing the adequacy of the Initial Study (IS)/Proposed MND and responses to those comments. The Final IS/MND, which includes these responses to comments, the Draft IS, and the technical appendices, will be used by the SNC Governing Board (SNC Board) in the decision-making process for the proposed project.

5.2 ENVIRONMENTAL REVIEW

The SNC prepared and distributed the IS/Draft MND, dated January 2014, for the proposed project (State Clearinghouse [SCH] No. 2014011007). The IS/MND was circulated for a 30-day review period which began on January 3, 2014 and extended to February 3, 2014. SNC received three (3) written comment letter and no verbal comments on the IS/MND. The agency that has commented on the Draft IS/MND is listed in Table 5-1, *Public Comments Received on the Draft IS/MND*.

Table 5-1. Public Comments Received on the Draft IS/MND

Letter/Comment No.	Commenter	Commenter Type
1	Governor's Office of Planning and Research – State Clearinghouse	State
2	Fresno County Library and Heritage Center	Local
3	California Department of Fish and Wildlife	State

Pursuant to State CEQA Guidelines Section 15074, the SNC Governing Board shall consider the IS/MND together with any comments received during the public review process. The SNC Governing Board shall adopt the proposed MND only if it finds on the basis of the whole record, including the IS and public comments, that there is no substantial evidence that the proposed project would have a significant effect on the environment and that the MND reflects the lead agency's independent judgment and analysis. The responses to comments are contained in this chapter, Chapter 5, *Response to Comments*, of this IS/MND. A copy of the numbered comment letters and lettered responses to each comment is provided in Section 5.4, *Response to Comments*, of this chapter.

5.3 REVISIONS TO THE DRAFT IS/MND

Revisions made to the text of the IS/MND are shown within this document. Clarifications to this IS/MND text are shown with underlining and text removed from the IS/MND is shown with ~~strikeout~~. Page numbers for the revisions are provided within the appropriate response in Section 5.4, *Response to Comments*, below.

5.4 RESPONSE TO COMMENTS

The letter comments received on the Draft IS/MND are addressed in their entirety in this section. Each comment contained in the letters has been assigned a reference code. The responses to reference code comments follow each letter. Three (3) written comment letter were received and no verbal comments were received during the public comment period.

Comment Letter 1



Edmund G. Brown Jr.
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Ken Alex
Director

February 4, 2014

Matthew Daley
Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, CA 95603

Subject: Soaproot Stewardship Project
SCH#: 2014011007

Dear Matthew Daley:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on February 3, 2014, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

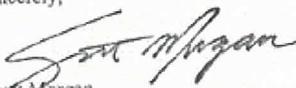
Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,


Scott Morgan
Director, State Clearinghouse



Enclosures

cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 325-3018 www.opr.ca.gov

**Document Details Report
State Clearinghouse Data Base**

SCH# 2014011007
Project Title Soaproot Stewardship Project
Lead Agency Sierra Nevada Conservancy

Type MND Mitigated Negative Declaration
Description The High Sierra Ranger District is requesting approximately \$350,000 in funding from the Sierra Nevada Conservancy's Proposition 84 Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Grant Program to reduce hazardous fuels and restore ecological components in the Soaproot Stewardship Project area in the Sierra National Forest. This project would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth.

Lead Agency Contact

Name Matthew Daley
Agency Sierra Nevada Conservancy
Phone 530 823 4898
email
Address 11521 Blocker Drive, Suite 205
City Auburn
Fax
State CA **Zip** 95603

Project Location

County Fresno
City
Region
Lat / Long
Cross Streets SR 168 and Dinkey Creek Road
Parcel No.
Township **Range** **Section** **Base** MDB&M

Proximity to:

Highways Hwy 168
Airports None within 30 miles
Railways
Waterways
Schools
Land Use

Project Issues Archaeologic-Historic

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 4; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 6; Air Resources Board; State Water Resources Control Board, Division of Financial Assistance; Native American Heritage Commission

Date Received 01/02/2014 **Start of Review** 01/03/2014 **End of Review** 02/03/2014

Response to Comment Letter 1: Governor's Office of Planning and Research - State Clearinghouse (February 4, 2014)

- A. Thank you for your comment. The participation of the State Clearinghouse in the public review of this document is appreciated. The commenter states that the State Clearinghouse distributed the Draft IS/MND for selected agencies to review; in compliance with the California Environmental Quality Act (CEQA). One comment letter was received from the California Department of Fish and Wildlife (CDFW) (January 30, 2014) and was attached to the comment letter. Responses to the CDFW letter are provided in Comment Letter 3. The comments have been noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.

Comment Letter 2

Redd, Christa

From: Daley, Matthew@SNC <Matthew.Daley@sierranevada.ca.gov>
Sent: Tuesday, January 14, 2014 10:28 AM
To: Redd, Christa
Cc: Namba, Valerie@DGS
Subject: Soaproot Documents
Attachments: Monache.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Christa,
I received this from the Fresno County Public Library

Thanks,
Matthew

From: Coletti, Karen [Karen.Coletti@fresnolibrary.org]
Sent: Monday, January 13, 2014 11:24 AM
To: Daley, Matthew@SNC
Subject: FW:

Matthew,
This is the information that was gathered. If you would like a hard copy I will be happy to send that as well. We are also having our Reference Department look at this as well.

Karen Coletti
Administrative Assistant
Fresno County Public Library
2420 Mariposa
Fresno, CA 93721
559-600-6237
Karen.Coletti@fresnolibrary.org

A

Monache

ROBERT F. G. SPIER

HANDBOOK OF NORTH AMERICAN
INDIANS
WILLIAM C. STURTEVANT

1978

Language, Territory, and Environment

The Monache (mō'nā, chē) were not a single people but comprehended at least six tribal groups: the Northfork Mono ('mō,nō), the Wobonuch ('wōpō,nōch), the Entimbich ('entimbich), the Michahay (michā'hī), the Waksachi (wāk'sā, chē), and the Patwisha (pāt'wishā). No federation or nation linked these independent tribes, which were distinguished from their Penutian-affiliated Foothill Yokuts neighbors primarily in language, although some units among them were bilingual. The Monache, often called the Western Mono, shared a distinct language in the Western branch of the Numic family with their neighbors to the east, the Eastern Mono and the Owens Valley Paiute (Lamb 1958; see "The Numic Languages," vol. 11).^{*} The Monache refer to themselves in their own language as *ni-nmi* 'person, people' and in English as Mono (Lamb 1958:96-97, personal communication 1975; Gifford 1932:16; Kroeber 1925:584).

The social and cultural identity of these tribes was primarily linguistic and locational. They differed from the Foothill Yokuts and the Southern Sierra Miwok (sometimes called Pohonichi) in language, with the possible exception of the "transitional" Michahay and Waksachi (Gayton 1948, 2:213, 254). The Monache differed from the Eastern Mono in being located west of the Sierra Nevada crest and in acculturation to the California scene (fig. 1).

The Northfork Mono were readily distinguished from other Monache by isolation, being separated from the Wobonuch by the essentially unattributable terrain between the headwaters of the San Joaquin and Kings rivers. Gayton (1948, 2:254) discusses a group of unorganized kin groups, evidently without tribal identity, that may have been in this region.

The Wobonuch are recognized as a unit even though their constituent tribelets were more or less independent. The organizing force may have been the example of

^{*} The sound system of the Northfork dialect of Monache has been analyzed by Lamb (1959a). The orthography he describes (substituting a few symbols to accord with Handbook practice) includes the stops *p*, *t*, *k*, *q*, *k'*, *q'*, *ʔ*; the affricate *c*; the spirants *s*, *x*, *h*; nasals *m*, *n*; semivowels *y*, *w*; front vowels *i*, *e*; back unrounded vowels *ɨ*, *ɤ*; back rounded vowels *u*, *o*. Vowel length can be written with a raised dot; long fortis consonants can be written double.

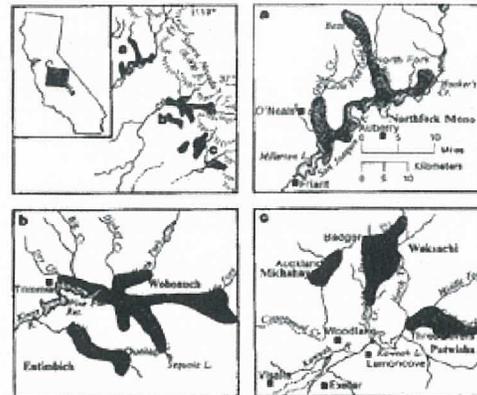


Fig. 1. Tribal territory including: a, Northfork Mono; b, Wobonuch and Entimbich; c, Michahay, Waksachi, and Patwisha.

Foothill Yokuts, such as the Choynimni, to the southwest.

The major affiliation of the Entimbich is still open to question, whether Monache or Yokuts. Gayton (1948, 2:254-255), who probably had the best basis for judgment, inclines to the view that the tribe had lineages derived from both peoples but may have originally been Yokuts. The Wobonuch had been infiltrating Entimbich territory since 1875 (Merriam 1930).

The Michahay, Waksachi, and Patwisha (whom Kroeber 1925:586 calls Balwisha) are deemed basically Monache (Numic-speaking) peoples who have partially absorbed Yokuts culture. As with the Entimbich, the classification chosen verges on being arbitrary until better information emerges. All of these peoples, like their neighbors along the western Sierra slope, were markedly bi- or multilingual.

The Monache were a second tier of aboriginal groups occupying the western slope of the Sierra Nevada. At lower levels along most of the same territory were Foothill Yokuts tribes, from the Chukchansi of the north to the Wikchamni at the southern end of the Monache range. The Foothill Yokuts occupied lands from the valley edge up to about 3,000 feet elevation (essentially the Upper Sonoran life-zone). The Monache lived principally between 3,000 and 7,000 feet elevation (correspond-

ing mostly to the Transition life-zone) but were able to move unhindered to higher elevations. They crossed the Sierra crest on trading expeditions at elevations between 11,000 and 12,000 feet.

The Northfork Mono moved about—seasonally, by reason of a death, or simply for variety—within a home territory centered on the North Fork of the San Joaquin River. Some hamlets were on the adjacent Fine Gold Creek and others were at Hooker's Cove on the San Joaquin. A detailed list of their settlements is furnished by Gifford (1932:18, 57-61).

The Wobonuch lived along various forks of the Kings River from its confluence with its own North Fork upstream. On the North Fork there were habitation sites up to the present Black Rock Reservoir. North of the river they evidently shared the stretch between Trimmer Springs and the confluence of the North Fork with the Tuhukwaj, one of the untribalized Monache groups. Mill Flat Creek, which drained Sequoia Lake into Kings River, was the location of at least two villages; from this area the Wobonuch were forced southward to the vicinity of Dunlap by sawmill operations in the twentieth century.

The Entimbich lived to the south and west of the Wobonuch and at a lower elevation, one comparable to that of Foothill Yokuts. Their principal village was at the present town of Dunlap and was shared beginning with the twentieth century with some displaced Wobonuch. Other sites lay down Mill Creek to its junction with White Deer and Rancheria creeks. Below that point was Foothill Yokuts (Choynimni) territory (Gayton 1948, 2:254-258).

The Michahay lived on the headwaters of Cottonwood Creek north of the present town of Auckland. The Patwishas' westernmost village lay on the left bank of the Kaweah River just below the confluence of its North and Middle Forks, close to the present town of Three Rivers. Eastward Patwisha territory probably extended up the Middle Fork of the Kaweah to Salt Creek or the East Fork (Gayton 1948, 1:58, map B).

The Waksachi territory was higher than that of Michahay and Patwisha, centering on Eshom Creek, a minor tributary of the Kaweah River's North Fork. Other Waksachi sites were along Dry Creek and Limekiln Creek from the present town of Badger downstream for 15 miles (Gayton 1948, 2:212-214, map E).

External Relations

All the Monache maintained close relationships with their neighbors, whether Monache or not. These external contacts included trading, traveling, intertribal assemblies for ceremonies, visiting, incursions into others' territories or common territory for resource exploitation, and marriage.

MONACHE

Intertribal coresidence should be considered a form of external relations, for it must have accelerated linguistic and cultural diffusion. For example, at the village of Tušao, about four miles northeast of Auckland, the Michahay, Waksachi, and Chukaymina lived together. The first two tribes are considered transitional Yokuts-Monache, but the last is unequivocally central Foothill Yokuts (Gayton 1948, 2:213).

Captive eagles (less commonly vultures or other birds) were displayed and danced over. The captors of these moiety-affiliated birds were given money and gifts, ostensibly the property of the captive. Groups went from village to village and from tribe to tribe to participate and to secure birds (Gifford 1932:39-41).

The joint use, by Waksachi, Patwisha, and Wikchamni (a Foothill Yokuts tribe), of uninhabited lands north of present Three Rivers for hunting and foraging illustrates another type of contact (Gayton 1948, 2:213).

The Monache generally traded with their Numic relatives on the east side of the Sierra Nevada, with trading expeditions moving in both directions. The exchange was principally in natural products with acorns being moved eastward while pine nuts, obsidian, and rabbitskins went in the other direction. In addition to securing items for their own use, the Monache were also middlemen in trades between the Yokuts proper and the Eastern Mono.

Hostilities involving the Monache and other tribes usually stemmed from injuries, often attributed to malevolent shamans, occurring to individuals. These people or their survivors sought revenge, usually by killing the person held responsible and sometimes his family as well. Occasionally a third party might become involved through harboring a fugitive or aiding one bent on revenge. Rarely did such incidents lead to wholesale hostilities.

The cultural summary that follows is based on data for the Wobonuch insofar as it is tribally specific, with notice taken of variations among other Monache.

Subsistence

Hunting, fishing, and the gathering of wild-plant foods were the basis of Monache subsistence. Their pursuit called for seasonal movements to various elevations on the Sierra slopes. The Northfork Mono also visited the eastern slope of the Sierra to gather pine nuts, while other Monache traded with Eastern Mono to secure the nuts.

Deer, which were a prime staple, were taken by stalking in a disguise, by driving into an ambush, by tracking a deer until it became exhausted, and by trapping with a spring-pole device that caught the deer by the leg. Deer were customarily shot with bow and arrow to kill them. Sharing of meat and other products was mainly voluntary and done more commonly by the better hunters.

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Foothill Yokuts

ROBERT F. G. SPIER

The Foothill Yokuts are a group of about 15 named Yokuts tribes who occupied the western slopes of the Sierra Nevada from the Fresno River southward to the Kern River (fig. 1). A further division into Northern Foothill (including the Chukchansi, Dumna, Kechayi, and Gashowu of the Fresno and San Joaquin river drainages), Central Foothill (including the Choynimni, Chukaymina, Gawia, Yokod, Wikchamni, and Yawdanchi of the Kings, Kaweah, and Tule river drainages), and Southern Foothill (primarily the Palewyami of the Poso Creek drainage) has been customary (Kroeber 1925; Gayton 1948). Problems of tribal synonymy do not loom large, but the enumeration of tribes is complicated by extinctions, the substantial independence of small groups of people, and confusion from the marked differences between singular and plural forms of tribal names. Kroeber (1925:478-482) has named at some length the

tribes of the foothills, and later authors have substantially agreed with him in their names and locations (Swanton 1952:523-525).

The several Yokuts tribes have sometimes been called "subtribes" or "tribelets" in order to reserve the tribal label for all the Yokuts. However, there was no Yokuts nation or any overarching political unity of these tribes within recorded times. The number of the Yokuts tribes, perhaps as many as 50, and the marked differences between peoples only a few miles apart make it unlikely that close alliances existed. This unusual situation, in the California context, is discussed briefly by Kroeber (1925:474-475). The distinctions between groups were most obviously linguistic and territorial; the people of one group spoke a distinct dialect of the Yokuts language and were the denizens of a particular place. Cultural differences were on a grosser scale, as between northern

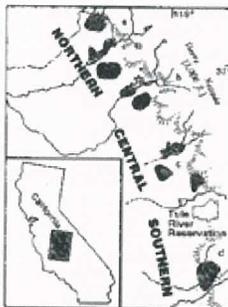
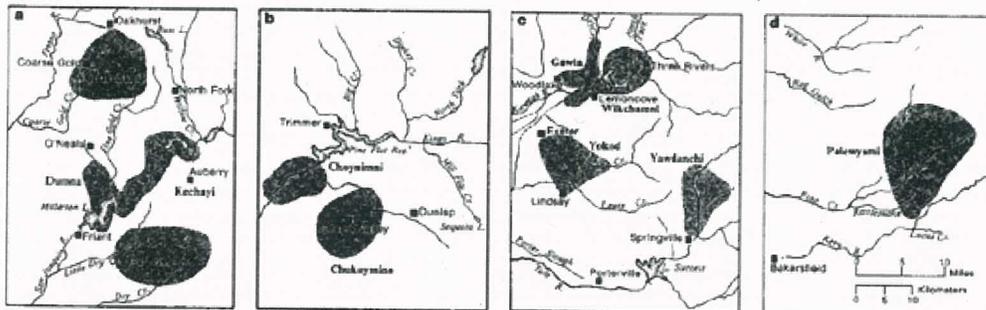


Fig. 1. Tribal territory including: a, Chukchansi, Dumna, Kechayi, and Gashowu tribes; b, Choynimni and Chukaymina tribes; c, Gawia, Wikchamni, Yokod, and Yawdanchi tribes; d, Palewyami tribe.



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and southern foothill peoples or between the foothill and valley Yokuts. It is possible to offer a generic cultural description that applies, with only minor exceptions, to all the Foothill Yokuts.

The individual identity of each Foothill Yokuts tribe is based primarily on residence in a recognized territory, use of a dialect of the Yokuts language, and practice of a way of life slightly different from that of its neighbors. Of these differences, the territorial one is most obvious and the others less clear. Each tribe inhabited one or several villages that were collectively central to the tribal lands. That is, the areas around these villages were considered to be home and to be exploited more or less exclusively by their residents. It appears that generally the territory of a tribe lay within one or two drainage systems, with creeks or valleys forming the stems along which villages were located. It must also be recognized that major rivers, such as the Fresno or the San Joaquin, were often nominal boundaries between tribes. However, the division of Foothill Yokuts tribes into Northern, Central, and Southern groups (a classification of questionable native origin) clusters tribes that fall within a major river drainage, so the boundary effect of rivers was probably more potential than real.

Most of the Yokuts identify more strongly with their individual tribal name or with that of the home village than with the generic Yokuts entity. The tribal names are not necessarily translatable, but the village names often refer to a plant or other physical feature of the location.

Even though intertribal marriages were frequent, at least in the nineteenth and twentieth centuries, and some involved alliances with non-Yokuts peoples, there still existed a strong tribal identification with the father's group. It is difficult to say whether the tribe or the village was the paramount unit of affiliation, but it was probably the tribe. People did move from village to village during a lifetime but remained within the tribe except for outmarriages by the women.

The unity among Yokuts tribes was not so strong as to preclude extra-Yokuts relations locally. The Chukchansi, northernmost of the Foothill Yokuts, had close alliances with the Southern Sierra Miwok, so much so that there is confusion about the tribal affiliation of some border villages. The Central Foothill Yokuts came into increasingly close contact with the Monache in the latter half of the nineteenth century.

Environment and Territory

The Sierra Nevada foothills rise, in 15 to 25 miles, from the San Joaquin valley floor (300-400 feet above sea level at its eastern edge) to elevations over 6,000 feet. Although the major streams generally flow westward or southwestward, their tributaries are irregular in direction and reflect a disorderly arrangement of ridges and valleys.

The rivers have cut few deep gorges so that it is feasible to follow the streams, too swift for navigation, on foot. This habitat includes two major life-zones: the Upper Sonoran, from 600 to 3,300 feet; and the Transition, from 3,300 feet to 6,200 feet. Above the Transition zone lay the more difficult environment of the High Sierra, which had few resources and did not encourage settlement. Most settlements for the Foothill people were between 2,000 and 4,000 feet. Thus a short journey afoot took an individual down to the San Joaquin valley floor or up through the coniferous forests. This close spacing of markedly differing zones broadened the scope of readily available resources.

Tribal boundaries among the Foothill Yokuts were somewhat vague. Streams formed the axis of tribal settlement as often as the boundary. In the Northern Foothill area tribal locations were disrupted by the activities of the Mariposa Battalion in 1851 (Eccleston 1957). Finally, the Yokuts tribes often gathered together or shared ranges during certain seasons of the year (Gayton 1948, 2:159).

Subsistence

The subsistence of the Foothill Yokuts was based on hunting and gathering with fishing as a supplement. Deer, quail, and acorns were prominently mentioned by informants. Beyond these mainstays there were many sources of food: pine nuts, ground squirrels, rabbits, wild oats, manzanita berries, ducks, trout, mussels, and wasp grubs among others. Importantly, the distinctive feature of subsistence was not a dependence upon one abundant resource, but the omnivorous character of the diet. As Kroeber (1925:523-526) has pointed out this diversity gave protection against famine as all these sources were unlikely to fail simultaneously.

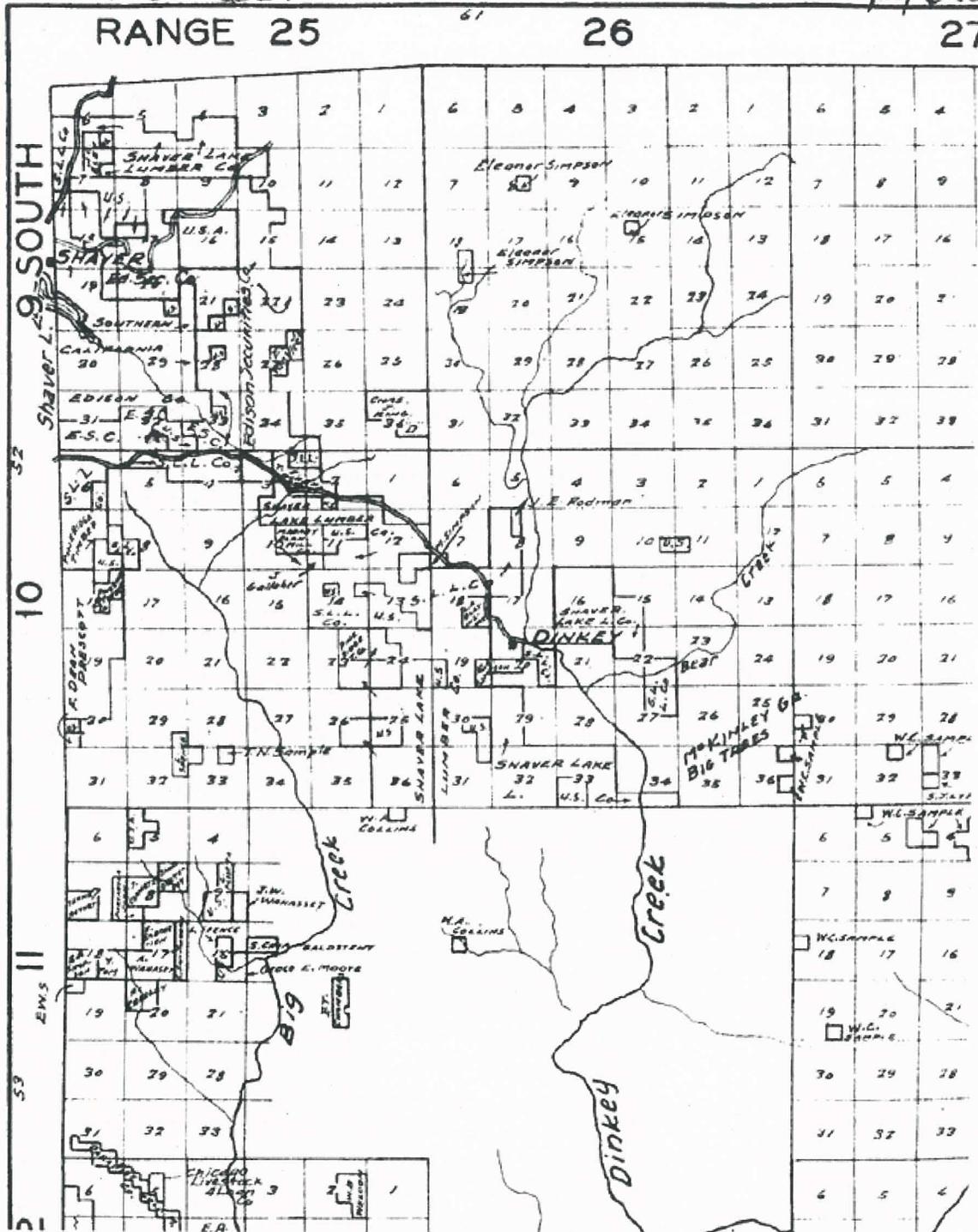
Deer were killed with the bow and arrow following still-stalking, driving (sometimes with fire), or an ambush from a booth at a permanent waterhole. Deer disguises, using head, antlers, and skin, are reported as having been used by all Foothill Yokuts except the Chukchansi. There is no evidence for the trapping of deer.

Quail were taken by extensive trapping and by shooting them as they roosted in trees. The quail traps called for substantial community effort, as reported among the Chukchansi. A fence, like a miniature stockade, was made of sticks closely set in the ground and extending upward to a height of a few feet. Noose traps, powered by a bent stick under tension, were set in openings in the fence at intervals of 20 to 50 or more feet. The ground-feeding quail would attempt to walk through these openings rather than fly over the obstacle across their path. These fences, reported as having been as long as a mile, yielded a good supply of birds when regularly patrolled.

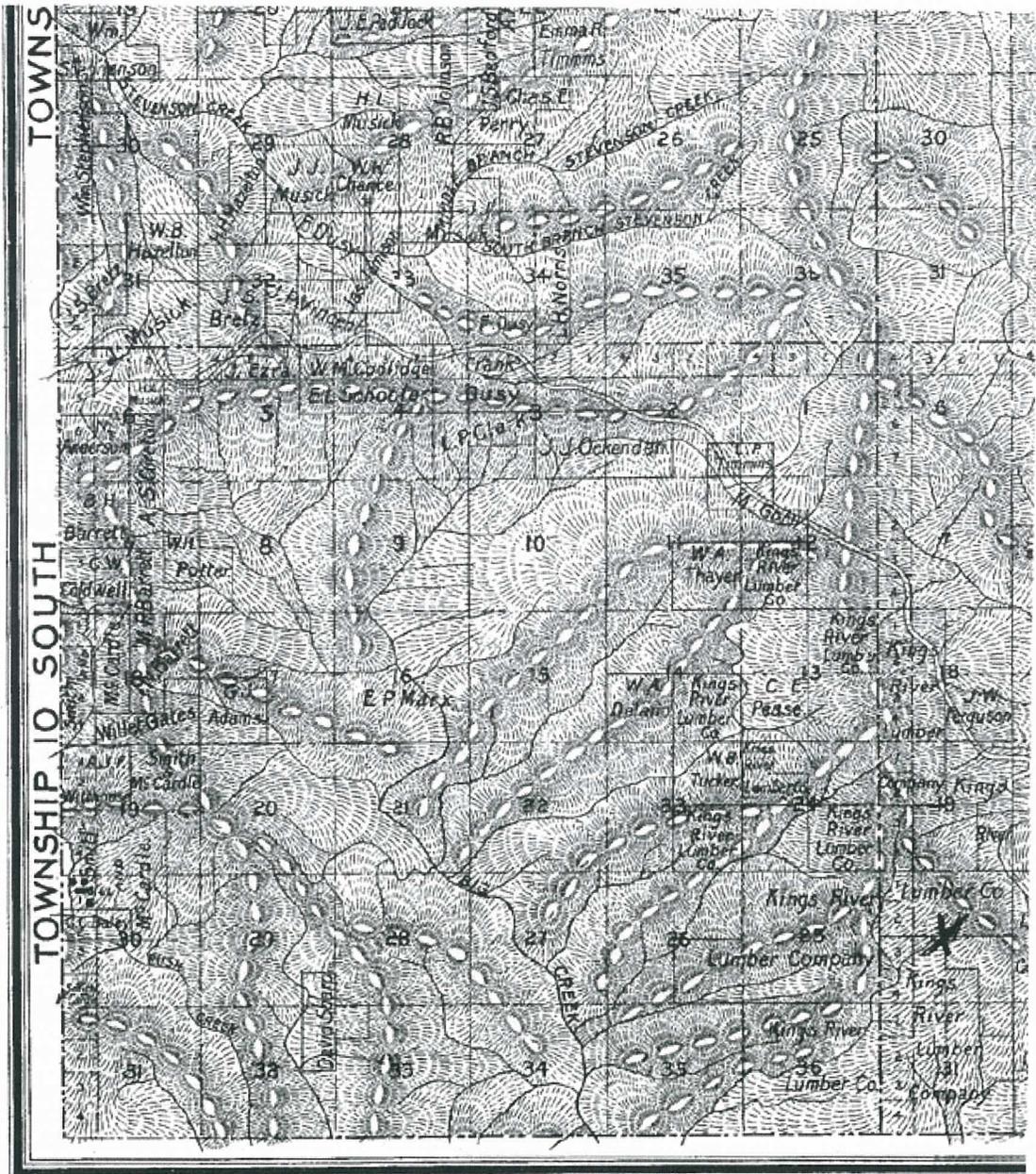
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1935 ED.

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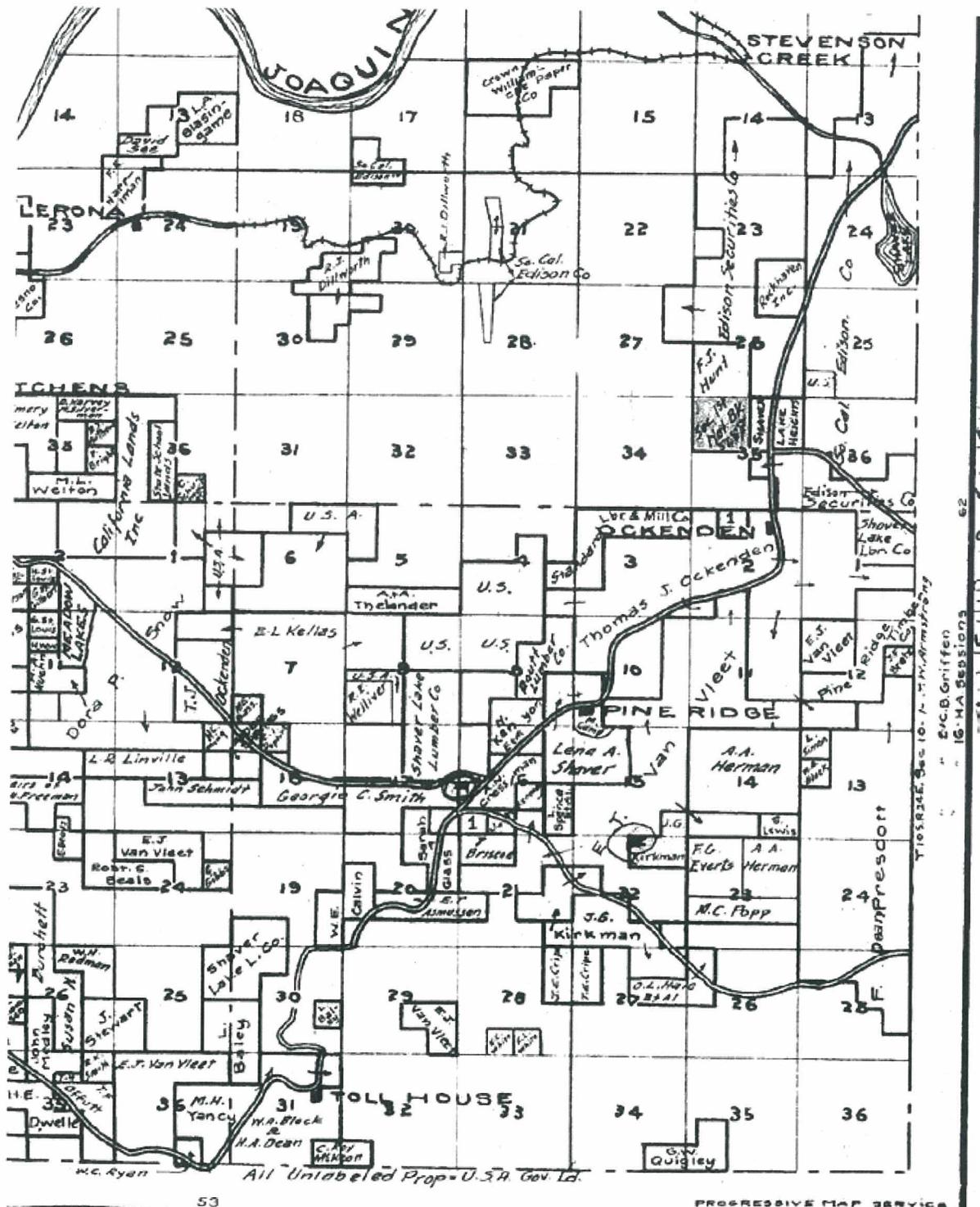


RANGE 25 EAST

ATLAS OF FRESNO COUNTY CALIFORNIA WITH ILLUSTRATIONS

THOS. H THOMPSON 1891

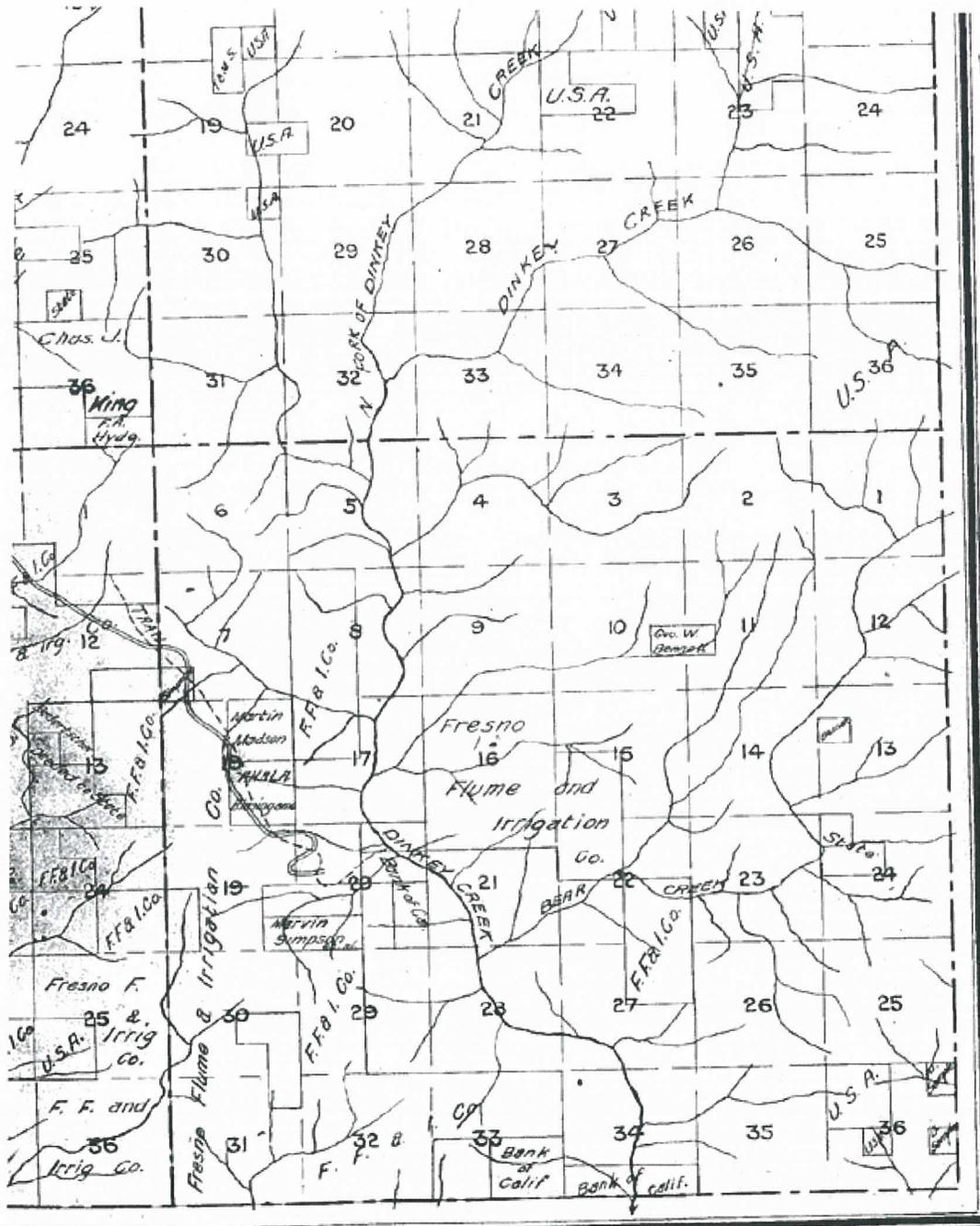
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RANGE 24 EAST

ATLAS: 1935

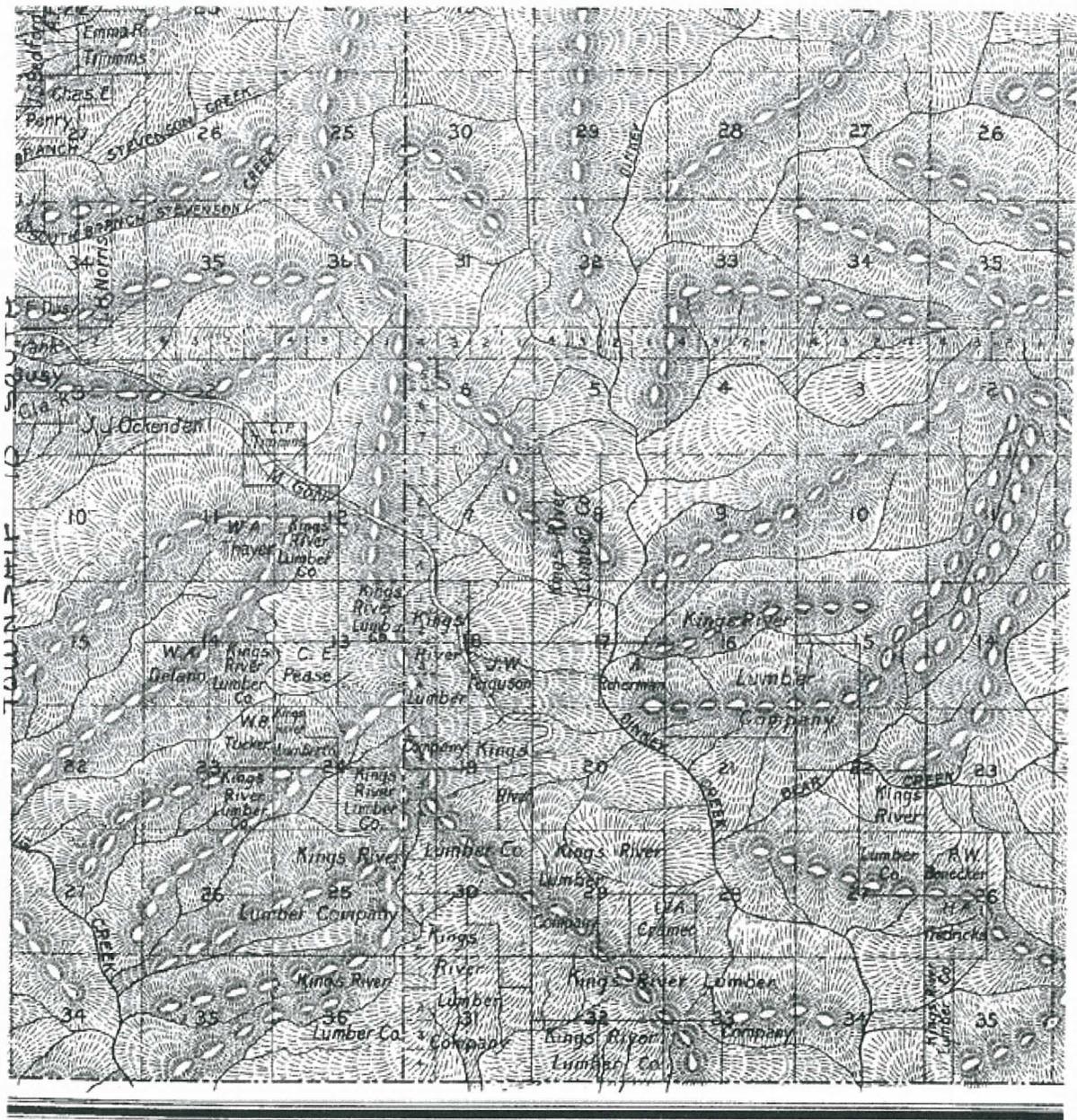


pg 6

TOWNSHIP 10

RANGE 24 EAST

ATLAS OF FRESNO COUNTY CALIFORNIA
WILLIAM HARVEY SR. 1907



RANGE 26 EAST

ATLAS OF FRESNO COUNTY CALIFORNIA WITH ILLUSTRATIONS

THOS. H. THOMPSON 1891

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***Response to Comment Letter 2: Fresno County Library and Heritage Center
(January 14, 2014)***

- B. Thank you for your comment. The participation of the Fresno County Library and Heritage Center in the public review of this document is appreciated. The commenter provides written information regarding the native people in the area from the *Handbook of North American Indians*, as well as historic maps of the project area. The comment does not present significant new environmental information, raise significant environmental issues, or directly challenge the information and adequacy related to the Draft IS/MND. The comment is noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.

Comment Letter 3



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director



January 30, 2014

Mathew Daley
Senior Grants Analyst
Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, California 95603

**Subject: Mitigated Negative Declaration (MND)
Soaproot Stewardship Project
SCH# 2014011007**

Dear Mr. Daley:

The California Department of Fish and Wildlife (Department) has reviewed the Mitigated Negative Declaration (MND) prepared by the Sierra Nevada Conservancy (Conservancy) for the Soaproot Stewardship Project (Project). The Conservancy is acting as the Lead Agency for the Project under the California Environmental Quality Act (CEQA) for the issuance of grant monies to the United States Department of Agriculture, Sierra National Forest, High Sierra Ranger District (Forest Service) for aspects of the Forest Service Soaproot Restoration Project. The CEQA document only covers a portion of activities analyzed in the larger Soaproot Restoration Project Environmental Assessment (EA). The Forest Service issued a Decision Notice and a Finding of No Significant Impact in September 2012 for the Soaproot Restoration Project. The EA is incorporated into the CEQA document by reference. The proposed Project includes the vegetation treatment of approximately 1,035 acres within the 7,120-acre Soaproot Restoration Project, located in the Sierra National Forest south of Shaver Lake. Vegetation treatments include a combination of biomass thinning and prescribed fire, and are designed to decrease fuel loads and stand densities in order to restore the landscape to a more fire-resilient condition while maintaining and improving habitat for sensitive wildlife, restoring watershed function, and restoring native species composition.

The EA, along with several technical documents, are only incorporated into the MND by reference, and while the EA is available on the Forest Service website, several of the technical documents are not. Further, the MND does not include a References section and it is assumed the citations are the identical ones included in the EA. In order to adequately assess the potential impacts of the Project to biological resources, results of special status species surveys need to be incorporated into the CEQA document prepared for the Project in order to determine whether or not any special status species, or their habitat(s), are present. This information is necessary to identify the appropriate

A

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mitigation, minimization, and avoidance measures which need to be implemented to minimize the potential impacts to less than significant levels and which should be included in the CEQA document prepared for this Project.

Specifically, the Department is concerned with the potentially significant impacts to the State endangered and State fully protected bald eagle (*Haliaeetus leucocephalus*); the State endangered great gray owl (*Strix nebulosa*); the State threatened Sierra Nevada red fox (*Vulpes vulpes necator*) and Sierra Nevada yellow-legged frog (*Rana sierrae*); the State Candidate fisher (*Martes pennanti*); the Species of Special Concern, spotted owl (*Strix occidentalis*), northern goshawk (*Accipiter gentilis*), foothill yellow-legged frog (*Rana boylei*); the State rare Tracy's eriastrum (*Eriastrum tracyi*); the State Species of Special Concern Western mastiff bat (*Eumops perotis californicus*), and the California Rare Plant Rank 1B.2 listed orange lupine (*Lupinus citrinus* var. *citrinus*), Abrams' onion (*Allium abramsii*), Mariposa pussypaws (*Calyptridium pulchellum*), Madera leptosiphon (*Leptosiphon serrulatus*), Yosemite lewisia (*Lewisia disepala*), Yosemite bog orchid (*Platanthera yosemitensis*), aromatic canyon gooseberry (*Ribes menziesii* var. *ixoderme*), Shevock's cooper moss (*Schizymenium shevockii*), and slender-stalked monkeyflower (*Mimulus gracilipes*). The MND includes several avoidance and minimization measures for some of the above listed species and other sensitive biological resources; however, not all of the Department's concerns are fully addressed in the MND. Our comments follow.

A

Department Jurisdiction

Trustee Agency Authority: The Department is a Trustee Agency with responsibility under CEQA for commenting on projects that could impact plant and wildlife resources. Pursuant to Fish and Game Code Section 1802, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species. As a Trustee Agency for fish and wildlife resources, the Department is responsible for providing, as available, biological expertise to review and comment upon environmental documents and impacts arising from project activities, as those terms are used under CEQA (Division 13 [commencing with section 21000] of the Public Resources Code).

B

Responsible Agency Authority

California Endangered Species Act (CESA): The Department has regulatory authority over projects that could result in the "take" of any species listed by the State as threatened or endangered, pursuant to Fish and Game Code Section 2081. If the project could result in the "take" of any species listed as threatened or endangered under the California Endangered Species Act (CESA), the Department may need to issue an Incidental Take Permit (ITP) for the project. CEQA requires a mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (sections 21001(c), 21083, Guidelines sections 15380, 15064, 15065). Impacts must be avoided or mitigated to less than significant levels unless the

CEQA Lead Agency makes and supports a Statement of Overriding Consideration (SOC). The CEQA Lead Agency's SOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code Section 2080. Issuance of an ITP is subject to CEQA review. The Department recommends that the CEQA document prepared for this Project describes and addresses the potential impacts to listed species; otherwise, preparation of a supplemental CEQA document would be necessary if issuance of an ITP is necessary.

Fully Protected Species: The Department has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish, pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. "Take" of any fully protected species is prohibited, and the Department cannot authorize their "take". The bald eagle is a fully protected species that is known to occur in the Project area vicinity. The Department recommends the CEQA document prepared for this Project evaluate and address potential Project-related impacts to this species and include appropriate species specific avoidance and minimization measures.

Unlisted Species: Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened (E, R, or T) on any State or Federal list to be considered E, R, or T under CEQA. If a species can be shown to meet the criteria for E, R, or T as specified in the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, and Section 15380), it ought to be fully considered in the environmental analysis for the Project. If special status animal or plant species are detected during ground disturbing activities, consultation with the Department is warranted to discuss potential avoidance, minimization, and mitigation measures.

Bird Projection: The Department has jurisdiction over actions which may result in the disturbance or destruction of active nest sites or the unauthorized "take" of birds. Fish and Game Code sections that protect birds, their eggs, and nests include sections 3503 (regarding unlawful "take", possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful "take" of any migratory non-game bird). Unless the Project-related activities will be conducted outside the bird nesting season, the Department recommends that the lead agency require appropriate avoidance and minimization measures for raptors and other nesting birds in the Project area be included in the CEQA document prepared for this Project.

Project Recommendations

Nesting Migratory Birds: Migratory birds protected by the Migratory Bird Treaty Act of 1918, have the potential to nest within the Project area. It is unclear if the Forest Service plans on conducting nesting bird surveys as part of this Project. The Department recommends that *prior* to treatment activities that a qualified Forest Service wildlife biologist or Forest Service contractors conduct surveys for nesting migratory birds. The Department recommends a minimum no-disturbance buffer of 250 feet be delineated around active nests of migratory birds and 500 feet around active nests of

B

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non-listed raptors until the breeding season has ended or until a qualified wildlife biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

C

Northern Goshawk and California Spotted Owls: The trees and snags within and in the vicinity of the Project may provide potential nesting habitat for the northern goshawk (NOGO) and California spotted owl (CSO). The MND states NOGO and CSO nest sites will have a ¼ mile no-vegetation treatment limited operation period (LOP) of February 15 to September 15 for NOGO and March 1 to August 15 for CSO. Neither the MND nor the EA indicate if surveys for the NOGO and CSO will occur prior to Project-related activities. Based on the Project description it is unclear if avoidance measures will be employed in the event that a CSO, or NOGO *detection* is made at a previously undocumented and/or unrecognized location within the Project area. If Project activities will occur during the northern goshawk nesting season or the CSO nesting season the Department recommends surveys following established protocols for active nests be conducted by a qualified wildlife biologist no more than 10 days prior to the start of the of the Project within potential nesting habitat. If northern goshawk or CSO active nest(s) are detected the Department recommends a minimum no-disturbance buffer of 0.25 miles be delineated around the nest until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

D

The MND states the above LOPs may be waived, where necessary, to allow for early season prescribed fire treatments. It is unclear who will make the decision to waive the LOP(s) and what criteria will be used to justify removing or minimizing the LOP. The Department recommends a qualified wildlife biologist make the determination that variances to the LOP(s) can occur and that the variance be based on compelling biological or ecological reasons. If variance from these LOP(s) occurs, the Department recommends a qualified biological monitor continuously monitor the nesting site(s) during the first 24 hours prior to any Project related activities to establish a behavioral baseline. Once work commences, nests should be continuously monitored to detect any behavioral changes as a result of the Project. If behavioral changes are observed, the work causing that change should cease. It is recommended the Department be notified in advance of implementation of a LOP variance.

Great Gray Owl (GGO): GGOs are known to occur in the Project area. The GGO population in California is extremely small and is isolated from other GGO populations putting the species in danger of extinction within the state. Hull et. al (2010) indicates that the Sierra Nevada population is a distinct lineage with respect to the larger species range in North America, and should be designated as a separate subspecies based on molecular data and life history differences. Studies have found that the majority of GGO nest sites are located within 600 feet of meadow edges (Winter 1980). Meadows and meadow complexes and adjacent timber stands in the Project area may be highly suitable GGO foraging, roosting and nesting habitat. Maintaining and enhancing these areas in a condition that can support the foraging and roosting needs of GGO breeding pairs and in a condition that provides potential future nesting sites for expanding local

E

populations is an important component of statewide GGO conservation. The Department recommends there be no Project treatments within 1,100 feet of meadows or meadow complexes totaling 10 acres or more until a complete two year GGO protocol survey has been completed using the methodology described by Beck and Winter (2000). If GGOs are detected, the Department recommends implementing mitigation measures to protect the meadows and surrounding forest habitat by establishing buffers of at least 600 feet from the meadow edge around meadows or complexes of meadows totaling 10 acres or more in which no treatments occur per Winter's (1982) recommendation. If treatments do occur within the 600 foot zone the Department recommends that they are limited to those necessary to enhance and maintain GGO habitat per Beck and Craig's 1991 Habitat Suitability Index model.

E

The MND states that active GGO nest will have a ¼ mile LOP, prohibiting vegetation treatments and road construction, during the nesting season (approximately March 1 through August 15). The Department recommends the LOP be extended through September 30, which would encompass the time that young disperse from nest stands. The Department recommends that LOP be maintained until young have fledged, and only lifted after a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. The Department advises avoidance and mitigation measures for GGO be fully addressed in the CEQA document prepared for the Project and made enforceable conditions of Project approval.

Willow Flycatcher: Riparian habitat within and in the vicinity of the Project area may provide potential nesting and roosting habitat for the willow flycatcher. Neither the MND nor the EA discuss the willow flycatcher, and it is unclear if surveys and avoidance and minimization measures for this species will be included in the Project design. The Department recommends a qualified wildlife biologist conduct a habitat assessment for willow flycatcher nesting and roosting habitat within the Project area, and if potential habitat exists, that focused surveys following established protocols, such as the Willow Flycatcher Survey Protocol for California (Bombay et. al, 2003), be conducted by a qualified wildlife biologist. If nesting willow flycatchers are observed, the Department recommends the establishment of a ¼ mile no-disturbance LOP buffer from May 1 to August 31, or until a qualified wildlife biologist has determined that the young have fledged and are no longer reliant on parental care for survival. Further, the Department advises potential nesting and roosting habitat be retained to encourage occupancy by willow flycatchers within the entire Project area.

F

Bald Eagle: The bald eagle is a State fully protected species, and bald eagles have been known to occur near Providence Creek Road and the Project area may contain suitable foraging habitat for the bald eagle. Neither the MND nor the EA discuss the bald eagle. The Department advises the bald eagle be fully addressed in the CEQA document prepared for the Project, including all avoidance, minimization, and mitigation measures, and that these measures be made enforceable conditions of Project approval.

G

Fisher: The fisher is a candidate species for listing under the CESA. The MND states fisher den sites will have a LOP buffer from March 1 to June 30, however, the MND does not state the size of the buffer nor how dens sites will be identified and monitored. Per the EA, the Project is within the Southern Sierra Fisher Conservation Area (SSFCA) and fishers are known to occur within the Project area. The EA indicates fisher den sites will have a 700-acre buffer consisting of the highest quality habitat, and that there are four known fisher den sites within the Project area and an additional eight sites within a three mile buffer of the Project boundary. Based on the Project description it is unclear if avoidance measures will be employed in the event that denning fisher is detected at a previously undocumented and/or unrecognized location within the Project area. The Department recommends the fisher LOP be extended through July 31, which would encompass the full maternal denning period. If Project related activities will occur during the maternal denning period the Department recommends a qualified wildlife biologist develop site specific take avoidance measures, which are advised to be incorporated into the CEQA document for this Project and made enforceable conditions of Project approval.

H

The MND indicates that the design criterion includes the protection of important fisher habitat structures within the SSFCA. The Project boundary also includes non-SSFCA land; the Department recommends treatments within and outside the SSFCA include the same proposed criterion and treatments that are designed to retain sufficient overstory and habitat elements (e.g. live trees with cavities, broken tops, snags, platforms) to sustain or encourage occupancy by fishers in the entire Project area. The Department advises avoidance and mitigation measures for fisher be fully addressed in the CEQA document prepared for the Project and made enforceable conditions of Project approval.

Sierra Nevada Red Fox: The Project area is within the range of the Sierra Nevada (SN) red fox, and may contain potential denning habitat for the species. Neither the MND nor the EA address the SN red fox, and it is unclear if avoidance, minimization, and mitigation measures for the SN red fox, and its habitat, will be incorporated into the Project design. The Department recommends potential den sites (i.e. burrows, rock outcrops, hollow logs and stumps) which cannot be completely avoided be checked by a qualified wildlife biologist for evidence of use by the species. If denning SN red fox are found within the Project area, the Department recommends the establishment of a 100 acre buffer of the highest quality habitat and a LOP from May 1 through July 31.

I

Sierra Nevada yellow-legged frog: The Project is within the range of the SNYF, and may contain potential habitat for the species. Neither the MND nor the EA addressed the SNYF. The EA briefly references the 2012 Aquatic Species Biological Assessment and Biological Evaluation (BA/BE) for the Soaproot Project; however, this document is not included as an appendix or attachment to either the MND or the EA. Further, the Aquatic BA/BE is not available on the Forest Service website for the Soaproot Restoration Project, thus the Department is unable to review the Forest Service's assessment of the SNYF and potential SNYF habitat within the Project area.

J

Wengert (2008) found that stream-dwelling SNYF in the Plumas National Forest infrequently moved overland long distances from the main channel of the stream. When they were observed outside of the stream channel, they were found from one (1) meter to 22 meters from the channel. A Federal Register proposal for Critical Habitat designation for the Sierra Nevada yellow-legged frog (78 FR 24522) (USFS 2013) states that upland areas adjacent to, or surrounding, breeding and non-breeding aquatic stream habitats that provide area for feeding and movement, consist of an area extending 25 meters from the bank or shoreline of the watercourse.

Based on the above information the Department recommends watercourses, within the Project area, be assessed by a qualified biologist for potential SNYF habitat, and that focused surveys be conducted by a qualified biologist in areas where potential habitat exists. It is advised that surveys be conducted prior to Project related activities and be conducted within 25 meters of watercourses. Upon detection of any life-stage of SNYF (adult, metamorph, larvae, egg mass) the Department recommends the establishment of a 25-meter no-operations buffer from the observed location, as well as from the high water mark of adjacent potential habitat. The Department requests notification of any SNYF detected as a result of surveys or observations made during Project-related activities. The Department advises the SNYF be fully addressed in the CEQA document prepared for the Project, including all avoidance, minimization, and mitigation measures, and made enforceable conditions of Project approval.

Special Status Plants: Neither the MND nor the EA state if surveys for special status plants will occur. The Department recommends following the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (November 24, 2009). This protocol, which is intended to maximize detectability, includes the identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. The Department recommends special status plant species are avoided whenever possible by delineation and observing a no-disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or specific habitat type(s) required by special-status plant species. If a Federally listed plant species is identified during botanical surveys then consultation with the United States Fish and Wildlife Service (USFWS) is warranted. The Department recommends mitigation measures for special status plants be fully addressed in the CEQA document prepared for the Project and made enforceable conditions of Project approval.

Federal Endangered Species Act: If biological surveys result in the detection of federally listed species or their habitat, survey results should be submitted to the USFWS who has jurisdiction over species listed under the Federal Endangered Species Act.

The Department supports the goal of increasing forest resilience to fire through this Project. Achieving that goal will provide significant long term benefits to the conservation of special status species and other forest dependent species. We hope

Mathew Daley
January 30, 2014
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you will incorporate the above feasible recommendations to provide additional short term protections to special status species during treatment implementation. If you have any questions about the comments please contact Margarita Gordus, Senior Environmental Scientist (Specialist), at the address provided on this letterhead, by telephone at 559-243-4014, extension 236, or by electronic mail at Margarita.Gordus@wildlife.ca.gov.

L

Sincerely,



Jeffrey R. Single, Ph.D.
Regional Manager

cc: Regional Water Quality Control Board
Central Valley Region
1685 E Street
Fresno, California 93706-2020

United States Fish and Wildlife Service
Forest and Foothill Branch
2800 Cottage Way, Suite W-2605
Sacramento, California 95825

ec: Margarita Gordus, CDFW
Margarita.Gordus@wildlife.ca.gov

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**Response to Comment Letter 3: California Department of Fish and Wildlife (CDFW)
(January 30, 2014)**

- A. Thank you for your comment. The participation of the California Department of Wildlife (CDFW) is greatly appreciated. The commenter summarizes the proposed project, feels that sufficient references were not provided in the Draft IS/MND, and states that the Environmental Assessment (EA)³ was available on the U.S. Forest Service website, but technical studies were not. The commenter feels that without the availability of the technical studies, the biological resources impacts could not be adequately reviewed. The comment letter lists multiple plant and wildlife special-status species that are of concern to CDFW and acknowledges that some of the species listed in the letter are addressed in the IS/MND and that species where CDFW had further concern were called out specifically in the comment letter.

Those reference documents used as a basis for the Initial Study/Mitigated Negative Declaration (IS/MND) are listed in Section 1.2, *Project Background and Previous Environmental Documentation*. For further clarity, the Final IS/MND has been revised to include Chapter 8.0, *References*, and contains the complete list of references provided in Section 1.2. In addition, the U.S. Forest Service Biological Assessment and Biological Evaluation for Terrestrial Wildlife (Terrestrial Wildlife BEBA) (High Sierra District, June 2012) was referenced throughout the IS/MND and is part of the administrative record, which was available upon request. It did not separately appear in the initial references list in Section 1.2, but has been added to both Section 1.2 and Chapter 8.0 of this IS/MND, for clarification. . These changes provide minor clarification to the text in the IS/MND and do not constitute a “substantial revision” pursuant to Section 15073.5 of the State CEQA Guidelines.

The Sierra Nevada Conservancy (SNC), as the Lead Agency, maintains the administrative record for this proposed project. The administrative record includes all references within this IS/MND and is kept on-file with SNC. The Notice of Intent incorporated in this IS/MND, as well as the Notice of Completion and Environmental Document Transmittal provided to the State Clearinghouse, both provided contact information for the Lead Agency if reviewers had questions or required additional information during the public review period. .

As stated by CDFW, some of the species within the list on page 2 are addressed adequately in the IS/MND and the specific species of CDFW concern are highlighted in the letter as individual comments (Comments 3-C through 3-L). Therefore, the Lead Agency has addressed the specific concerns raised by CDFW pertaining to the proposed project regarding specific species, CDFW jurisdiction and authority, permit requirements, and the Federal Endangered Species Act (FESA) in Responses to Comments 3-B through 3-L, below.

- B. The commenter provides definitions for CDFW’s authority as terms such as “take”, fully protected species, unlisted species, and bird protection. The commenter defines the terms “fully protected species”, “unlisted species”, and “bird protection” and requests that the IS/MND include potential impacts to these resources, if applicable. The commenter states that if evaluations for the resources that are present within the project boundaries are not provided, then the proposed project would need an incidental take permit, which is issued by CDFW. This response, Response to Comment 3-B, applies to CDFW’s jurisdiction and authority. For details regarding specific concerns for certain species or groups, please refer to Responses to Comments 3-C through 3-K, below.

³ The EA is a document that was prepared by the U.S. Forest Service, Sierra National Forest, High Sierra Ranger District pursuant to the National Environmental Policy Act (NEPA), as referenced on page 2 of this IS/MND.

The SNC acknowledges CDFW's jurisdiction and authority over biological resources pursuant to the Fish and Game Code Section 1802 and the California Endangered Species Act (CESA). As discussed on page 13 of the IS/MND, the Sierra National Forest contains many special status wildlife and plant species. Given the potential for state and federal special status wildlife and plant species to occur in the project area, the applicant prepared multiple technical studies to evaluate potential impacts to resources within the project area covered under the previously approved Environmental Assessment (EA), which includes the entire area of the proposed project considered in the IS/MND. A list of these technical studies is provided in Section 1.2, *Project Background and Previous Environmental Documentation*, page 2 of this IS/MND, and again in Chapter 8.0, *References*. Specific to biological resources, the following technical studies were prepared by the applicant in order to evaluate potential impacts to fully protected species, unlisted species, and nesting birds and raptors:

- Botanical Resources Biological Evaluation and Biological Assessment and Noxious Weed Risk Assessment for the Soap Root Restoration Project (no date)
- Riparian Conservation Objectives Consistency Report – Soaproot Restoration Project (August 2012)
- Aquatic Species Biological Assessment and Biological Evaluation for the Soaproot Project (May 2012)
- Migratory Landbird Conservation on the Sierra National Forest (June 2012)
- Biological Assessment and Biological Evaluation for Terrestrial Wildlife for the Soaproot Restoration Project (June 2012)
- Management Indicator Species Report for Soaproot Restoration Project (May 2012)
- Cumulative Watershed Effect Analysis, Soaproot Project – Baseline and Detailed CWE Analysis FSH 2509.22 (May 2012)

In addition to the above-listed evaluations, the applicant received management direction regarding desired conditions for listed, proposed, and/or sensitive species and their habitats in the Sierra National Forest from the following (High Sierra District, June 2012):

- Sierra National Forest Land and Resource Management Plan;
- Sierra Nevada Forest Plan Amendment Final EIS and Record of Decision (which contains forest-wide management standards and guidelines);
- Forest Service Manual and Handbooks;
- National Forest Management Act;
- National Environmental Policy Act;
- Endangered Species Act;
- Healthy Forest Restoration Action of 2004; and
- Pacific Southwest Regional Forester policy and management direction

These resources are discussed in detail in the Biological Evaluation and Biological Assessment (BEBA) reports listed above.

As stated in the IS/MND, and further addressed in the BEBAs prepared for the proposed project, the proposed activities have been designed to minimize potential impacts to state and federal special status species. Specific design criteria are provided in Appendix A of this IS/MND, which reduce impacts to special status wildlife and plant species. In addition, the BEBAs provide detailed analysis of special status wildlife and plant species, as well as management indicator species.

With the design criteria (refer to Appendix A), the proposed project would have a less than significant impact on special status wildlife and plant species. Thus, the Lead Agency and the applicant (U.S.

Forest Service) have concluded appropriately that an incidental take permit is not required. The comment is noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.

- C. The commenter recommends that prior to any treatment activities, a qualified U.S. Forest Service wildlife biologist conduct surveys for nesting migratory birds. The commenter also recommends that a no-disturbance buffer be set up for migratory bird nests and non-listed raptors.

Impacts to birds were evaluated in the *Migratory Landbird Conservation on the Sierra National Forest* (High Sierra District, June 2012) and the Terrestrial Wildlife BEBA (High Sierra District, June 2012). Potential impacts to migratory bird species would be minimized through the adherence of the Sierra Nevada Forest Land and Resource Management Plan Standards and Guidelines for snags/down wood debris, riparian resource buffers, limited ground disturbance, and maintenance of canopy closure. The design criteria for this proposed project are provided in Appendix A of the IS/MND and include buffer zones as related to state and federal special status species, which are generally 0.25 mile (1,320 feet). In addition, the design criteria require limited operating periods (LOPs) that further reduce potential impacts to migratory species. Surveys for special status birds are on-going within the project area. Prior to the initiation of treatment, all work would be coordinated with a U.S. Forest Service biologist to determine nesting status. Prior to treatment activities, a qualified U.S. Forest Service biologist would survey the project area and would work with the Pacific Southwest Research (PSW) Station to establish the appropriate nest buffers for any nesting birds identified. The proposed project would ultimately improve the health of the forest, as well as migratory bird habitat, and would be a benefit to wildlife species within the project boundary. The comment is noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.

- D. The commenter states that there is potential habitat in the project area for both northern goshawk and California spotted owl. The commenter requests pre-treatment surveys, avoidance measures if the species are found in undocumented or unrecognized areas. In addition, the commenter questions who is responsible for determining the need for an LOP waiver, requests surveys prior to activity, and requests continuous surveys during treatment activity.

The Terrestrial Wildlife BEBA (High Sierra District, June 2012) provides an evaluation of wildlife species and their habitat, including the northern goshawk and California spotted owl. The proposed project would ultimately improve the health of the forest as well as habitat and would be a benefit to wildlife species within the project boundary.

Northern goshawk: Northern goshawk territories are managed on the Sierra National Forest as protected activity centers (PACs) as set forth in the Sierra Nevada Forest Plan Amendment prepared in 2004 (High Sierra District, June 2012). The Sierra National Forest conducted northern goshawk surveys, in coordination with the PSW Station, for the larger Soaproot Restoration Project in 2004, 2005, 2006, and 2010. According to protocol, these results are only applicable for one year (High Sierra District, June 2012). Thus, as discussed below under the heading *survey requirements*, prior to treatment activities, the U.S. Forest Service biologist would be consulted and surveys would be conducted per protocol.

With respect to the LOP waiver, this determination would be made by the U.S. Forest Service District Ranger with recommendations from the U.S. Forest Service biologist. If an LOP waiver is determined appropriate, there would be continuous monitoring. However, there must be a biological reason for the LOP to be waived. In order to consider waiving the LOP, protocol level surveys would need to be conducted and compliance with guidelines in the Sierra Nevada Forest Plan Amendment

would be required. Therefore, the applicant (U.S. Forest Service) and the Lead Agency do not anticipate that an LOP waiver would be issued by the U.S. Forest Service District Ranger for the proposed project.

California spotted owl: The Sierra National Forest has conducted surveys for California spotted owl presence and reproductive status across the forest, including the project area, since the early 1980s. The California spotted owls that are within the project area continue to be surveyed by the PSW Station. The U.S. Fish and Wildlife Service (USFWS) issued a 12-month finding in May 2006 that concluded that the scale, magnitude, and intensity of effects on the California spotted owl resulting from fire, fuels treatments, timber harvest, and other activities did not rise above the threshold necessitating protection of the species under the Endangered Species Act (ESA) (High Sierra District, June 2012).

Survey requirements: As stated in the IS/MND, as well as the NEPA EA and the Terrestrial Wildlife BEBA, there would be a no-disturbance buffer during the breeding season (February 15 through September 15 for northern goshawk and March 1 through August 15 for California spotted owl), unless there are no nesting species. If a bird or nest is found outside the PAC, the U.S. Forest Service, in conjunction with the PSW Station, would delineate the appropriate buffer (0.25-mile) and implement the LOP for the appropriate season (February 15 through September 15 for northern goshawk and March 1 through August 15 for California spotted owl). In addition, prior to the initiation of treatment, all work would be coordinated with a U.S. Forest Service biologist to determine nesting status or if additional pre-treatment surveys need to be conducted (High Sierra District, June 2012). The comment is noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.

- E. The commenter states that the great gray owl is known to occur in the Sierra National Forest and recommends that there be no treatments within 1,100 feet of meadow or meadow complexes totaling 10 acres or more until a complete protocol level survey is conducted. The commenter also recommends that the LOP be extended through September 30 or until a qualified biologist determines that the young have fledged.

The Terrestrial Wildlife BEBA (High Sierra District, June 2012) provides an evaluation of wildlife species and their habitat, including the great gray owl. The great gray owl is found in coniferous forests and usually nests within 600 feet of the forest edge of meadows and adjacent open foraging habitat. There have been incidental sightings on the southwest portion of the larger Soaproot Restoration Project area as well as a pair of great gray owls that reproduced in 2011 and had two young. The U.S. Forest Service has delineated a Protected Activity Center (PAC) with approximately 213 acres of habitat for the great gray owl. While the GIS survey identified approximately 0.6 acre of meadow in the vicinity of the larger Soaproot Restoration Project area, field reconnaissance and survey efforts by the U.S. Forest Service found that there are areas of wet ground but these areas are not characterized as meadow (High Sierra District, June 2012). Therefore, there are no meadows or meadow complexes in the project area that total the 10-acre threshold mentioned by the commenter.

There would be no entry into meadows by mechanical equipment as part of the proposed project. In addition, design criteria (refer to Appendix A) require a 100-foot buffer around perennial waters and meadows where no entry by mechanical equipment is allowed. As with the northern goshawk and the California spotted owl (refer to Response to Comment 3-D), prior to the initiation of treatment, surveys would be conducted for the great gray owl and all work would be coordinated with a U.S. Forest Service biologist (High Sierra District, June 2012). As discussed in the IS/MND, vegetation treatments are prohibited within 0.25-mile of a great gray owl nest between March 1 and August 15.

Because there are no meadow or meadow complexes within the project area, an increase in the buffer (1,100 feet) or an extension of the LOP (to September 30) is not warranted. The proposed project would ultimately improve the health of the forest as well as habitat and would be a benefit to wildlife species within the project boundary. The comment is noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.

- F. The commenter states that the project area may contain habitat for willow flycatcher and that the IS/MND should evaluate any impacts. The commenter also recommends that protocol level surveys be conducted by a qualified biologist and requests a 0.25-mile no-disturbance buffer between May 1 and August 31 if nests are identified. The willow flycatcher is considered a U.S. Forest Service sensitive species. The Terrestrial Wildlife BEBA (High Sierra District, June 2012) provides an evaluation of wildlife species and their habitat, including the willow flycatcher. The habitat type for the willow flycatcher is not within the project boundary. There are no known sightings of the willow flycatcher within the project boundary. Thus, no impact would occur as a result of the proposed project. The proposed project would ultimately improve the health of the forest, as well as the willow flycatcher habitat, and would be a benefit to wildlife species within the project boundaries. The comment is noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.
- G. The commenter states that the bald eagle is a State fully protected species and is known to occur near Providence Creek Road and the project area may contain suitable foraging habitat and feels that the bald eagle should be evaluated appropriately. The bald eagle is also considered a U.S. Forest Service sensitive species. The Terrestrial Wildlife BEBA (High Sierra District, June 2012) provides an evaluation of wildlife species and their habitat, including the bald eagle. The habitat type for the bald eagle is not within the boundary of the proposed project. The last known sighting was an incidental sighting in 1976. Thus, no impact would occur as a result of the proposed project. The proposed project would ultimately improve the health of the forest, as well as the bald eagle habitat, and would be a benefit to wildlife species within the project boundary. The comment is noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.
- H. The commenter states that the fisher is a candidate species for listing under CESA and feels that the IS/MND does not state the size of a buffer for den sites, if measures will be employed in the event that denning fisher is detected and undocumented or unrecognized areas as well as areas outside the SSFCA, and recommends that the LOP be extended thought July 31.

With respect to the information regarding den site buffers within the IS/MND, the fisher den site buffer is discussed on page 5 of the IS/MND. Specifically, Section 2.1.1, *Biomass Thinning Prescription*, states that current and past fisher den sites consisting of the highest quality habitat require a 700-acre buffer. Designations of den buffers would be achieved using new information that comes from current PSW Station research up until a contract for the proposed project would be awarded. After that point, new information would still be collected and utilized but the prescription in the buffers would not change for this proposed project. Page 13 of the IS/MND has been revised to restate this buffer area. These changes provide minor clarification to the text in the IS/MND and do not constitute a "substantial revision" pursuant to Section 15073.5 of the State CEQA Guidelines.

The Terrestrial Wildlife BEBA (High Sierra District, June 2012) provides an evaluation of wildlife species and their habitat, including the Pacific fisher. The fisher has been extensively researched within and around the Sierra National Forest since the mid-1990s. These studies include the Kings

River Fisher Project, which is centrally located within the southern Sierra on the Sierra National Forest and includes the project area. The Sierra Nevada Adaptive Management Project is also conducting an intensive investigation into fisher habitat and response to management disturbance; the area of this study is mainly within the Sierra National Forest (High Sierra District, June 2012).

On the High Sierra Ranger District, den site buffers have been delineated for 21 sites, of which four are within or adjacent to the larger Soaproot Restoration Project and eight are within 3.1 miles of the larger Soaproot Restoration Project (High Sierra District, June 2012). As stated in the Terrestrial Wildlife BEBA, den buffers were developed for each female that had denned at least once since 2007. It is unlikely that new occurrences would be identified due to the extensive and ongoing surveys by the PSW Station and surrounding research projects; however, if there is an area that has not been previously surveyed, presence is assumed and pre-treatment surveys would be identified during biology consultation, as discussed below. However, the PSW Station provides continuous monitoring of the species in the Sierra National Forest, including the project area. In addition, prior to the initiation of treatment, all work would be coordinated with U.S. Forest Service and PSW Station biologists to determine denning status and the need for additional surveys would be identified during this consultation (High Sierra District, June 2012). If additional surveys are needed, they would be conducted prior to commencement of the treatment.

Design criteria, refer to Appendix A, contain measures that would be implemented for the proposed project and would reduce impacts to less than significant levels. Design Criteria 25 through 28 are specific to the Pacific fisher and its habitat. The proposed project would also follow the Sierra Nevada Forest Plan Amendment Final EIS and Record of Decision, which contains forest-wide management standards and guidelines, including ones specific to the fisher: 85 (establishes the LOP within the den buffers), 86 (requires avoidance of fuel treatments in den buffers), and 87 (identifies the den buffer radius). For the proposed project, the fisher den buffer is 700 acres, if they are found in the area during pre-treatment surveys. Therefore, the proposed project would implement design criteria and measures to protect the fisher within all areas of the proposed project boundaries.

With respect to the extension of the LOP, the PSW Station continuously monitors the Sierra National Forest for fisher, including the project area. The PSW Station provides the LOP based on their monitoring of the species. Therefore, the Lead Agency feels that because the fisher is continuously surveyed and monitored within the proposed project area, an extension of the LOP (to July 31) would not be necessary. In addition, any extension of the LOP would need to be approved by the PSW Station. The proposed project would ultimately improve the health of the forest, as well as fisher habitat, and would be a benefit to wildlife species within the project boundary. The comment is noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.

- I. The commenter states that the proposed project is within the Sierra Nevada red fox range and that the IS/MND should address the Sierra Nevada red fox. The Sierra Nevada red fox is also considered a Forest Service sensitive species. The Terrestrial Wildlife BEBA (High Sierra District, June 2012) provides an evaluation of wildlife species and their habitat, including the Sierra Nevada red fox. According to the California Wildlife Habitat Relationships (CWHR) version 8.2 modeling, and field reconnaissance, the project area has no habitat for the Sierra Nevada red fox in the Sierra mixed conifer zone or ponderosa pine zone, which includes the project area (High Sierra District, June 2012). There are no known sightings of the Sierra Nevada red fox within the project boundaries. Thus, no impact would occur as a result of the proposed project. The proposed project would ultimately improve the health of the forest, as well as Sierra Nevada red fox habitat, and would be a benefit to wildlife species within the project boundary. The comment is noted for the record and will

be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.

- J. The commenter states that the Aquatic Species BEBA was not an appendix to the IS/MND. The commenter recommends that the watercourses within the project area be assessed for the Sierra Nevada yellow-legged frog (SYLF) habitat and focused surveys be conducted. The commenter states that if there is detection of the Sierra Nevada yellow-legged frog, a 25-meter no-operations buffer should be established and that the CDFW be notified of any SYLF detections.

With respect to the availability of the technical studies for this proposed project, please refer to Response to Comment 3-A. The Sierra Nevada Conservancy (SNC), as the Lead Agency, maintains the administrative record for this proposed project. The administrative record includes all documents that the Lead Agency used in preparing this IS/MND. The administrative record is kept on-file with SNC. The Notice of Intent incorporated in this IS/MND, as well as the Notice of Completion and Environmental Document Transmittal provided to the State Clearinghouse, both provided contact information for the Lead Agency if additional information was required or questions arose during the public review period.

The High Sierra Ranger District analyzed a larger project (Soaproot Restoration Project) within the Aquatic Species BEBA. These reports discuss the mountain yellow-legged frog (MYLF). The MYLF was recently recognized as a separate species from the SYLF that is not on the Sierra National Forest. The Aquatic Species BEBA evaluated the MYLF because the report for the proposed project was completed prior to the split of the species by the Federal Register in April 2013. The information regarding the MYLF is applicable because at the time of the study, the MYLF and SYLF were considered the same species.

Sierra National Forest does provide habitat for, and has occurrences of, the SYLF. The nearest critical aquatic refuge (CAR) area is the Snow Corral CAR. GIS surveys identified suitable habitat for the MYLF/SYLF within the project area; this area is a high gradient stream with no connection to the Snow Corral CAR. The Aquatic Resources BEBA concluded that there is no suitable habitat within, or adjacent to, the project area for the MYLF/SYLF nor is there any critical habitat for the MYLF/SYLF. The Lead Agency coordinated with the U.S. Forest Service's aquatic biologist on February 10, 2014 regarding this issue.⁴ Based on the U.S. Forest Service aquatic biologist's evaluation of habitat, terrain, elevation (almost entirely below 5,000 feet above sea level), lack of connected waterbodies from higher elevations, and the known occurrences in the Sierra National Forest, the project area would not be considered suitable habitat for SYLF. In addition, there are no proposed project activities within the Snow Corral CAR (High Sierra District, May 2012).

To further address MYLF/SYLF, proposed project activities near riparian areas would maintain an 80 percent canopy cover in the Streamside Management Zones (SMZs) and 60 percent cover in riparian conservation areas (RCAs). Design criteria provided in Appendix A contain measures that would be implemented for the proposed project and would reduce impacts to less than significant levels. Design Criteria 49 through 98 are specific to general aquatics and special status aquatic wildlife and their habitat. As part of the design criteria, all perennial streams have a 100-foot no-mechanical entry SMZ area. Prior to the initiation of treatment, all work would be coordinated with a U.S. Forest Service biologist. Thus, impact would be less than significant as a result of the proposed project. In addition, as with other species, the proposed project would ultimately improve the health of the forest,

⁴ February 10, 2014 discussion between the Sierra Nevada Conservancy staff, RBF Consulting staff, Kimley-Horn staff, and the District Fisheries/Aquatic Biologist for the High Sierra Ranger Station, Sierra National Forest regarding the MYLF, SYLF, habitat presence, and the separation of the two species by the Federal Register.

as well as SYLF habitat, and would be a benefit to wildlife species within the project boundary. The comment is noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.

- K. The commenter recommends that protocol surveys for state special status plants be conducted for the proposed project. The commenter recommends that special status plant species be avoided and a no-disturbance buffer of at least 50 feet from the outer edge of the plant population or habitat type be provided. As listed in Section 1.2, *Project Background and Previous Environmental Documentation*, a Botanical Resources BEBA and Noxious Weed Risk Assessment (Botanical Resources BEBA) was prepared for the larger Soaproot Restoration Project (High Sierra District, no date). According to the Botanical Resources BEBA, initial record searches identified two plant species and one category of critical habitat that may be found within the Sierra National Forest.

Current U.S. Forest Service policy calls for a pre-field review of available information and then a field reconnaissance to determine if sensitive plants are found in the project area and if proposed activities pose a threat to identified sensitive plants. Botanical surveys for noxious weeds and special status plants species were conducted simultaneously for the Soaproot Restoration Project, which includes the proposed project. The Botanical Resources BEBA identified the *Carpenteria* as having one occurrence in a pre-commercial thinning, and pile burning areas. Thus the proposed project has the potential to impact this species. However, pre-treatment surveys would be conducted by the U.S. Forest Service botanist and populations would be flagged to be avoided prior to treatment activities (refer to Design Criteria, Appendix A of the IS/MND) (High Sierra District, no date). Veined water lichen was identified immediately north of the Soaproot Restoration Project boundary within Summit Creek. Direct impacts would not occur due to the RCAs and SMZs; however, indirect impacts would occur as a result of erosion from ground-disturbing activities. Project design criteria⁵ and best management practices (BMPs)⁶ (provided in Appendices A and B, respectively) would be implemented to reduce potential impacts to a less than significant level. Finally, there was one, 0.3-acre fen in the Soaproot Restoration Project area, within a small wet meadow that is surrounded by mixed-conifer forest. Similar to the veined water lichen, direct impacts would not occur; however, indirect impacts associated with soil compaction and erosion have the potential to occur. With the implementation of the pre-treatment surveys for flagging and avoiding special status plant species, and the implementation of design criteria and BMPs, that help to reduce both direct and indirect impacts, any impacts as a result of the proposed project would be less than significant.

In addition to the Botanical Resources BEBA conclusions, the proposed project would implement the design criteria (Appendix A of the IS/MND) and BMPs (Appendix B of the IS/MND). Prior to the initiation of treatment, all work would be coordinated with a U.S. Forest Service botanist and pre-treatment surveys for state and federal special status species would be conducted. If special status plant species or natural habitats are identified, the populations or areas would be flagged for avoidance. The comment is noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.

⁵ While impacts are less than significant with all of the design criteria, design criteria that help to reduce erosion and runoff further reduce indirect impacts to botanical resources. In addition, design criteria 99 through 108 are specific to botanical resources.

⁶ While the incorporation of all BMPs help to keep impacts less than significant, BMPs that help to reduce erosion and runoff further reduce indirect impacts to botanical resources and include, but are not limited to, BMPs 1-5, 1-10, 1-12, 1-13, 1-17, 1-18, 1-20, 1-22, 2-12, and 7-3.

- L. The commenter recommends that if federally listed species or their habitats are detected, the Lead Agency and the applicant should consult with USFWS. In addition, the commenter acknowledges the support of the goal of the project and feels it will provide long term benefits to the forest.

The applicant (U.S. Forest Service) has prepared several BEBAs for the proposed project to address terrestrial wildlife, aquatic wildlife and botanical species within the proposed project area, and consulted with the USFWS throughout the preparation of these studies. The U.S. Forest Service continues to coordinate with the USFWS with respect to the Soaproot Restoration Project. In addition, the U.S. Forest Service continues to conduct surveys in the area and coordinates with the appropriate state and federal agencies based on survey results. Therefore, the proposed project is in compliance with the Federal Endangered Species Act, the appropriate agencies are being consulted, and state and federal special status species are being appropriately addressed.

The support of CDFW on the long-term benefits of this proposed project is acknowledged and appreciated. The comment is noted for the record and will be provided to the Sierra Nevada Conservancy Governing Board for consideration. No further response or change to the Draft IS/MND is necessary.

6.0 DISTRIBUTION LIST

- Sierra National Forest Headquarters
1600 Tollhouse Road
Clovis, CA 93611
- USDA Forest Service
Ray Porter, District Ranger
P.O. Box 559
Prather, CA 93651
- Fresno County Board of Supervisors
Bernice E. Sheidel, Clerk of the Board
2281 Tulare Street, #301, Hall of Records
Fresno, CA 93721-2198
- Sierra Cedars C.S.D
42315 Blue Mountain Lane
Shaver Lake, CA 93644
- Shaver Lake Branch Library
41344 Tollhouse Road
Shaver Lake, CA 93664
- Central Library
2420 Mariposa Street
Fresno, CA 93721
- Auberry Branch Library
33049 Auberry Road
Auberry, CA 93602

7.0 PREPARERS

Matthew Daley, Senior Grants Analysts, Sierra Nevada Conservancy

Christa Redd, Senior Environmental Planner, Kimley-Horn and Associates, Inc.

Nicole Marotz, Senior Environmental Planner, RBF Consulting, a M. Baker International Company

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Appendix A
Design Criteria

DESIGN CRITERIA

To minimize potential adverse impacts to resources in the area from the proposed project, the High Sierra Ranger District identified the following design criteria within the NEPA Environmental Assessment/Finding of No Significant Impact prepared for the Soaproot Restoration Project. These design criteria are broken into resource groups but many of these features can reduce impacts to other resources as well. Project-wide design criteria are applicable to the proposed project as a whole and are not resource specific.

The following design criteria cover the entire Soaproot Restoration Project; this proposed project under consideration by SNC is a part of the larger Soaproot Restoration Project. Therefore, while there are many design criteria listed below, not all would be required under the proposed project. Only design criteria related to the proposed project as defined by SNC for CEQA purposes would be applied (as discussed in Chapter 2.0, Project Description). The design criteria are considered part of the proposed project activities, where applicable.

PROJECT-WIDE DESIGN CRITERIA

1. Trees 30 inches DBH and larger would be retained throughout the Project area.
2. Thinning in plantations and other areas would be limited to periods when slash would be less likely to provide habitat to the Ips species of bark beetle (December to June) to reduce the potential from insect attacks. These dates can be changed based on an evaluation of a certified silviculturist.

The following design criteria (#3 - #11) are standard operations procedures for protecting resources during piling and firing operations. Most have been developed from generations of firefighting and prescribed burning and are considered BMPs by fire managers.

3. All burn piles would have a good base to keep the pile from toppling and would have enough distance between piles to prevent premature ignition during burning. Piles would be located so that burning would cause minimal damage to standing green trees. Depending on the size of the residual (leave) trees, this would be at least 20 feet from the bowl of any live tree.
4. If the green conifer slash must be piled following vegetation treatments, slash piles would be located in open, sunny locations outside of the dripline of leave trees and kraft paper may be used to protect an ignition point from wet weather. Slash piling would occur from July 1 through October 31 to enhance the drying of created slash and reduce the build-up of detrimental insect populations (except when restricted by a limited operating period [LOP]).
5. Burning would only be initiated on "burn days" designated by the SJVUAPCD when satisfactory wind dispersal conditions prevail.
6. Piles are typically ignited with drip torches, except within RCAs. Fire would be allowed to creep between piles while maintaining a burn intensity that would minimize tree bole scorch height or mortality of the retained trees and would be ignited using a pattern that allows animals to escape the fire. For example, one end of the pile would be lighted or an area would be left unignited to serve as an escape route.
7. To mitigate the impacts of prescribed fire to air quality, best available control measures (BACMs) would be employed as required under Section 190 of the Clean Air Act, as amended in 1990. The U.S. Environmental Protection Agency developed implementation strategies and BACMs for areas that are designated as in serious non-attainment for PM10 in 1992. Specific techniques to reduce fire emissions include the following:

- Commonly used reduction techniques would be applied, such as burning units after harvest before new live fuels appear, burning in the springtime prior to “green-up,” burning when 1,000-hour fuel (woody debris larger than three inches in diameter) moistures are high, and burning when the duff is wet (after fall precipitation, or during winter and spring).
 - Avoidance techniques would be used, such as burning on cloudy days when the plume and residual smoke cannot be seen, burning during periods of atmospheric instability for better smoke dispersal, and burning during periods of low visitor use.
 - Techniques to optimize flaming combustion would be utilized, including burning piled fuels rather than broadcast burning, reducing the amount of soil in piles, and employing rapid ignition to create a high-intensity fire.
 - All activities would conform to the State Implementation Plan (SIP).
 - A full conformity analysis would be conducted, as required by the Clean Air Act and the SIP to assess whether the action produces less than the minimum emissions.
8. The following roads would be managed as strategic and tactical holding/ignition lines for prescribed fire operations and would be snagged prior to burn operations:
 - Clarence Burn: FS roads 10S18, 10S02, and 10S404
 - Soaproot Units: FS roads 10S04 and 10S05
 - Rush and Little Rush Underburn Units: FS roads 10S43, 10S43X, and 10S02D
 - Virginia Burn: FS roads 10S50 and 10S02
 9. All other roads within prescribed fire burn boundaries may be used as secondary control lines (to be determined by burn boss during ignition operations). Snags may be felled as necessary if they pose a threat to firefighter safety at time of burn. Tagged wildlife trees would be protected using measures designed to reduce direct effects of prescribed fire and would be avoided to the extent possible.
 10. Large woody debris created from hazard tree operations would be removed to increase efficiency of fire control operations and improve firefighter safety.
 11. Larger trees would be protected during understory burning to maintain stand structures that would contribute to future habitat diversity.
 12. Prior to implementing the Project near private lands, landlines would be flagged to ensure that innocent trespass is avoided.
 13. Legal access on existing roads through private lands would be acquired before Project implementation.

GENERAL TERRESTRIAL WILDLIFE

14. Four of the largest snags per acre would be retained.
15. At least five well-distributed logs would be maintained per acre as large woody debris representing the range of decomposition classes defined in the SNF LRMP.
16. Thinning around individual oaks would occur to increase oak crown and acorn production. To provide for oaks for wildlife needs, five to 35 percent of growing space devoted to oaks would be maintained. All decadent oaks throughout the stands would be retained within the limits appropriate for each forest type. Overtopping of decadent oaks would not be prevented.

The following design criteria (#17 - #20) would apply to the Deer Winter Range within the Project area as covered under the North Kings deer herd management plan:

17. Where it exists, 40 to 50 percent brush cover would be retained. Where south slope cover is lacking, additional north slope cover would be retained to compensate.
18. Where it exists, roadside screening cover would be retained to improve cover where it is deficient.
19. Tree stocking densities in plantations on key winter range areas would be minimal to prolong understory life. Two hundred trees per acre or fewer would be suggested.
20. Prescribed burning would be done in fall to stimulate non-sprouting shrub species, and in spring for sprouting shrub species.

SPECIAL STATUS TERRESTRIAL WILDLIFE

21. All treatment units within one-quarter mile of a Northern goshawk nest site during the breeding season would have an LOP prohibiting vegetation treatments from February 15 to September 15, unless surveys confirm that goshawks are not nesting.
22. Breeding season LOP restrictions for goshawk may be waived, where necessary, to allow for use of early season prescribed fire treatments.
23. All treatment units within one-quarter mile of an active great gray owl nest stand during the nesting period would have an LOP prohibiting vegetation treatments and road construction from March 1 to August 15. The LOP would not be needed unless an owl is found, in which case the nest stand would get a one-quarter mile PAC established around it (per U.S. Forest Service District wildlife biologist).
24. In meadow areas of great gray owl PACs, herbaceous vegetation would be maintained at a height commensurate with the site capability and habitat needs of prey species.

The following design criteria would be implemented to protect the Pacific fisher and its habitat:

25. Pacific fisher den site buffers would have a LOP prohibiting vegetation treatments from March 1 to June 30, as long as habitat remains suitable.
26. Key large tree denning structures needed by Pacific fisher would be retained to the extent possible (to achieve desired conditions for fisher as stated in the SNFPA ROD 2004).
27. Within Pacific fisher den site buffers, prescribed fire may be used to treat fuels if no other reasonable alternative exists.
28. Within the Southern Sierra Fisher Conservation Area (SSFCA), prior to vegetation treatments, design criteria such as prescribed burning techniques would be implemented to protect important habitat structures as identified by the wildlife biologist. Important habitat structures include large diameter snags and oaks, patches of dense large trees (one-quarter to two acres in size), key large tree nesting structures, small understory trees, and coarse woody material. Mechanical treatments would be used when appropriate to minimize effects on preferred fisher habitat elements.

The following design criteria would be implemented to protect the California spotted owl and its habitat:

29. All treatment units within one-quarter mile of the activity center during the California spotted owl breeding season would have a LOP prohibiting vegetation treatments from March 1 to August 15, unless surveys confirm that owls are not nesting.
30. Breeding season LOP restrictions for spotted owl may be waived, where necessary, to allow for use of early season prescribed fire treatments.
31. Within HRCAs outside WUI defense zones, at least 50 percent canopy cover averaged within the treatment unit would be retained.
32. Outside of HRCAs and WUI defense zones, at least 50 percent canopy cover would be retained within the treatment unit. Where canopy cover must be reduced below 50 percent, then at least 40 percent canopy cover averaged within the treatment unit would be retained.
33. Mechanical treatments may be conducted to meet fuels objectives in PACs located in WUI defense zones. In PACs located in WUI threat zones, mechanical treatments are allowed where prescribed fire is not feasible and where avoiding PACs would significantly compromise the overall effectiveness of the landscape and fire and fuels strategy. Mechanical treatments should be designed to maintain habitat structure and function of the PAC.
34. Mechanical treatments would not occur within a 500 foot radius buffer around a spotted owl activity center within a designated PAC. Prescribed burning however is allowed within the 500 foot radius buffer.
35. Within PACs located outside the WUI, stand-altering activities would be limited to prescribed fire activities to reduce surface and ladder fuels. In forested stands with overstory trees 11 inches DBH and greater, prescribed fire treatments would be designed to have an average flame length (the average length of a flame at a given point – expressed in feet) of four feet or less.
36. Hand treatments, including handline construction, tree pruning, and cutting of small trees (less than six inches DBH) may be conducted prior to burning as needed to protect important elements of owl habitat.

WATERSHED & RIPARIAN

37. Applicable BMPs would be incorporated into all Project activities and implemented to protect water quality. Specific BMPs and the activities to which they apply are listed in Appendix B.
38. Streamside Management Zones (SMZs), Riparian Management Areas (RMAs), and RCAs, as identified in the SNF LRMP, would be applied to delineate areas where riparian habitat considerations would be emphasized. SMZ, RMA, and RCA widths are listed in Table 4. On steep slopes, SMZs are extended by three feet for each percent over 30 percent (for example, the SMZ would be 15 feet wider than the minimum width on a 35 percent slope). All guidelines and restrictions for these areas as established by the district hydrologist and aquatic biologist and defined in the SNF LRMP would be followed.

Table A-1. RCA, SMZ, and RMA widths (High Sierra Ranger District, September 2012).

Feature Type	RCA Width	Stream Class	SMZ Width	RMA Width	Corresponding GIS Layer Stream Order
Perennial Streams	300 feet	I *	At least 100 ft	100 feet	3+
Seasonally Flowing Streams (includes ephemeral streams)	150 feet	II	At least 75 ft	N/A	2
		III	At least 50 ft		-
		IV	At least 25 ft		1
		V	None required		-
Streams in Inner Gorge	Top of inner gorge	Varies			
Special Aquatic Features (fens, bogs, springs, seeps, lakes, ponds, wetlands, etc.)	300 feet	N/A	N/A	100 feet	Identified on GIS layers or in the field
Perennial Streams with Riparian Conditions extending more than 150 feet from edge of streambank		I	At least 100 ft		
Seasonally Flowing streams with riparian conditions extending more than 50 feet from edge of streambank					

39. In areas with known CWE concerns where tractor piling is required to achieve treatment objectives, all SMZ widths would be increased by 25 feet (Class IV = 50 feet; Class III = 75 feet; etc.), plus the slope adjustments described in Sierra Supplement No. 1.
40. Any seeps, springs, fens, and/or wet areas discovered during Project implementation that are not already identified on Project analysis maps would be treated as perennial areas with 300 foot RCA and 100 foot SMZ no equipment buffers, unless otherwise classified by the District hydrologist or aquatic biologist.
41. New or replacement culverts would be sized to accommodate the 100-year flow, including expected sediment and debris, and designed to minimize the potential for stream diversion onto the road.

All WIN sites would be coordinated with the District aquatic biologist for aquatic/riparian species or habitat occurrences at or around stream crossings. The following design criteria would apply to activities for WIN site #54381 (FS road 10S04 Rush Creek crossing improvement) (refer to aquatic species section for species specific design criteria):

42. All designs and improvement recommended for the stream crossing improvement would be coordinated with the District aquatic biologist and hydrologist and accepted prior to finalization.
43. Any removal of vegetation outside of the roadbed would be approved by the District aquatic biologist.
44. Bank destabilization or watershed issues created by Project activities would be repaired prior to the start of the first winter season.
45. If necessary, silt fencing would be installed to prevent or reduce sediment from entering the stream channel.
46. Fill materials would be approved prior to use.
47. Operations would cease for 24 hours after rainfall greater than 0.1 inches.
48. Removal of fill materials would be done after units have been harvested if it is causing stream degradation or downstream flow reduction.

GENERAL AQUATICS

49. Riparian vegetation would not be cut during Project activity unless approved by the District aquatic biologist.
50. Any discovery of amphibians or reptiles (e.g. frogs, toads, salamanders, and turtles) during Project sale preparation and implementation would be reported to the District aquatics biologist immediately.
51. If newly listed or unknown occurrences of federally listed T & E, proposed (P), candidate (C), or FS sensitive (FSS) aquatic species are found within the affected Project area during sale preparation or implementation, additional species protection measures may be needed (Endangered Species Act, SNF LRMP compliance).
52. To ensure that management activities that can reduce tree canopy cover within RCAs do not adversely affect water temperatures necessary for local aquatic- and riparian-dependent species assemblages, canopy cover would be maintained at 80 percent within the SMZ (or at existing conditions if canopy cover is less than 80 percent) and at 60 percent within the remaining RCA.
53. Stream crossing structures would not create barriers to upstream or downstream passage for aquatic-dependent species.
54. Direct lighting of riparian vegetation would be avoided. No direct lighting within SMZs. However, prescribed fires would be allowed to back into riparian areas.
55. When broadcast burning in RCA/SMZ areas, ignition would be stopped within 100 feet of the stream or aquatic feature and fire would be allowed to back down into the area.

56. Helicopter “ping pong ball” lighting within RCAs would not be allowed.
57. Dozer or hand fire line construction within RCAs would follow species specific design criteria and would adhere to BMPs outlined in the District hydrologist report.
58. Fire lines necessary within SMZs would cross perpendicular to streams, follow the natural landscape contour, and be hand cut unless consulted by the district hydrologist or aquatic biologist. Fire lines would be designed and constructed to reduce sediment entry into channels and would be waterbarred. At a minimum, a waterbar should be placed on either side of each stream crossing.
59. Fuels and other toxic materials would not be stored within RCAs except at designated administrative sites and sites covered by a Special Use Authorization.
60. Refueling of chainsaws or other equipment within RCAs would use the following guidelines:
 - Do not refuel within an RCA unless there are no other alternatives. Any locations within an RCA used for refueling must first be approved by the District hydrologist or aquatic biologist.
 - Site specific refueling area plans for difficult terrain within the Project area can be developed for refueling within an RCA if no other options are available (i.e. use of a spill pad under chainsaw while refueling within RCA).
 - If site specific refueling area plans are developed, at a minimum, refueling must take place outside of the SMZ (BMP 2.11).
 - Any spills (regardless of amount) would be cleaned up immediately. Refueling would occur on a spill pad to avoid soil and water contamination.
 - Ensure spill plans are reviewed and up-to-date (BMP 7.4).

The following design criteria would be implemented within SMZs or RCAs associated T&E, P, C, or FSS occupied aquatic/riparian species habitat (additional measures may apply for occupied habitats beyond the SMZs/RCAs):

61. Hand piles within occupied aquatic species habitat would be located outside of SMZs unless approved by the District aquatic biologist or a site specific plan is developed for that unit. See specific species guidelines for identified buffers in occupied habitat.
62. Trees within SMZs of occupied TES habitats would not be removed (drop and leave) unless the area is field reviewed for aquatic species habitat prior to Project work and approved by the aquatic biologist or unless the work can be accomplished from an existing FS roadside only and no soil disturbance occurs while implementing activities. If soil is disturbed during tree removal, Project activities in the SMZ would stop immediately and rehabilitation work would be completed after consultation with the District aquatic biologist and hydrologist.
63. End-lining, or skid trail construction in the SMZs of stream channels would not be allowed (BMPs 1.8, 1.19).
64. New landing construction or temporary road construction would not be allowed within SMZs. Any new landing sites proposed within an RCA would follow BMP 1.12 and would be reviewed by the hydrologist and aquatic biologist.
65. For use on existing landings within RCAs or SMZs, the “Flow Chart” would be followed. Existing landings located within an RCA or SMZ would be field reviewed and approved by the District hydrologist and aquatic biologist prior to use.

66. All cull and other materials would be removed from approved landings located within SMZs of meadows or perennial streams.
67. Temporary roads would not be constructed within SMZs unless approved by the District hydrologist and aquatic biologist.
68. Skid trails, landings, and temporary roads would be designed to eliminate the potential to capture surface run-off and then deliver sediment into or divert stream flow from occupied or suitable habitat for aquatic/riparian species.
69. Skid trails, landings, temporary roads, and end-lining activities would not cross through or within 500 feet of any stream, waterbody or meadow with occupied habitat for federally listed T&E or within 100 feet of C or FSS aquatic species habitat.
70. Skidding and end-lining would not be allowed in or across meadows, perennial, or intermittent streams.
71. Skid trails, landings, and temporary roads, would be properly cross-ditched after use or before winter precipitation, whichever comes first. These activities would also be slashed, ripped or mulched if necessary (BMP 1.16 and 1.17).
72. Any soil damage within RCAs as a result of skidding/end-lining would be rehabilitated.

If stream drafting is necessary, the following design criteria would be implemented (BMP 2.5):

73. Water drafting candidate sites should be selected by the sale administrator and approved by the hydrologist and aquatic biologist prior to use (BMP 2.5).
74. Water drafting sites should be at least 500 feet to 0.6 miles away from occupied aquatic species habitat (as determined by the aquatic biologist).

The following requirements would be monitored by the High Sierra Ranger District appointed hydrologist or aquatic biologist:

75. Drafting sites would be visually surveyed for frogs and their eggs before drafting begins.
76. A screened intake device and pumps with low entry velocity and suction strainers with screen less than two millimeters (1/8 inch) in size would be used to minimize removal of aquatic species, including juvenile fish, amphibian egg masses and tadpoles, from aquatic habitats.
77. The suction strainer would be inserted close to the substrate in the deepest water available and placed in a canvas bucket to avoid substrate and aquatic species disturbance).
78. Drafting would not be allowed unless immediate downstream discharge from drafting site is maintained at 1.5 cubic feet per second (cfs) or greater (BMP 2.5).
79. Water drafting would be permitted to remove no more than 50 percent of any stream's ambient discharge that is over 1.5 cfs (BMP 2.5).
80. Where treatments are proposed in habitat for T, E, C, or FSS aquatic and riparian species, only water would be used for dust abatement within RCAs.

SPECIAL STATUS AQUATIC WILDLIFE

The following design criteria would be implemented to protect the Western pond turtle (FSS species) and its habitat:

81. All activities within 325 feet of any stream channel identified as Western pond turtle occupied habitat would only occur between June 15 and October 15 (or first winter rain) to protect nesting, breeding, and overwintering sites. This also applies to WIN site treatments, unless approved prior to treatments by the District aquatic biologist. If Project activities need to occur in a unit outside of the LOP, the District aquatic biologist would be consulted for on-site surveys or additional measures needed to ensure species viability.
82. When possible, equipment and soil disturbance in units that overlap occupied terrestrial habitats would be minimized for the protection of underground Western pond turtle nests.
83. Mechanical equipment would not be allowed off of already established roads (FS roads 10S04, 10S04A, and 10S430) within 325 feet of Rush Creek and associated tributaries.
84. A strategy for piles that would need to be located within 325 feet from perennial streams identified as occupied habitat for the Western pond turtle along Rush Creek, Big Creek, or tributaries of Big Creek would be consulted with the District aquatic biologist.
85. Endlining and skidding would not be allowed within 325 feet of Rush Creek and associated perennial streams unless location is surveyed for potential nesting habitat for Western pond turtle prior to Project activities.
86. If Western pond turtles are located in the Project area during implementation, they would be gently moved into a similar and safe place nearby (i.e. stream channel) in the direction they were traveling. The District aquatic biologist would be notified of any sightings.

In addition to the design criteria for activities within 325 feet of occupied stream habitat, the following would apply to prescribed fire activities within this area:

87. Timing, special needs, new TES species occupancy information, and sensitivity of prescribed fire activity would be coordinated with District specialists prior to implementation.
88. Strategies that are employed must be weighed out to ensure the outcome would benefit the Project as a whole both short-term and long-term (i.e. implementing handline in or near a riparian zone in order to protect larger scale damage to the riparian zone or forest land).
89. Large gatherings of personnel and equipment would be avoided in riparian zones.
90. National fire retardant guidelines would be followed for perennial streams occupied with TES aquatic species.

The following design criteria would apply to activities for WIN site #54381 for protection of the Western pond turtle during those activities (additional measures may be added during Project implementation if necessary):

91. Project activities would occur during the fall (September to mid-October). If access is needed prior to September, field review of stream flow conditions would be conducted to evaluate for appropriateness of timing and additional effect to habitat and species.

- At a minimum, Project activities can occur within October 15th to June 15th to protect dispersal, breeding, nesting, and overwintering habitats.
92. Prior to daily Project activities, WIN site would be surveyed for any individuals utilizing the crossing habitat. Individuals would be moved upstream or downstream to a safe location. If individuals are found directly within the Project area during daily work, activities would be stopped until individuals can be moved by the District aquatic biologist or qualified person to a safe location.
 93. If water diversion is necessary during Project activities, selection and approval of diversion and outflow locations would be coordinated with the District aquatic biologist.
 - If pumps are needed to pump water from diversion around the Project area to a downstream location, all drafting requirements above would be followed. On a daily basis, diversion pool would be surveyed to ensure no Western pond turtle individuals have moved into the area. Individuals would be relocated to a safe place upstream or downstream in a similar habitat.
 94. Steam channel dewatered for Project would be kept to a minimum distance.
 95. Western pond turtle individuals located in stream habitat temporarily dewatered for Project work would be relocated by the District aquatic biologist or qualified person to an approved location.
 96. De-watering of the main channel (Rush Creek) outside of the approved crossing area would not occur downstream of the crossing, even temporarily.
 97. All equipment would be stored at a minimum of 325 feet away from Rush Creek unless site is approved by the District aquatic biologist and would be clean and free of mud and dirt prior to bringing to Project location.
 98. Equipment would not be allowed to turn within 100 feet of Rush Creek (back and forth only) and would not be allowed off the road bed unless approved by the District aquatic biologist.

BOTANICAL RESOURCES AND INVASIVE SPECIES

99. Any discovery of sensitive or special interest botanical species during Project sale preparation and implementation would be reported to District botanist.
100. If newly listed or unknown occurrences of federally listed T, E, P, C, or FSS plant species are found in the Project area during sale preparation and implementation, additional species protection measures may be needed.
101. Impacts to known occurrences of sensitive plants within the Project area would be avoided. The contract administrator or Project manager would consult with FS botanical staff prior to Project implementation to ensure appropriate buffers and flagging are in place.
102. Pile burning would not be conducted in sensitive plant occurrences.
103. To protect sensitive plant species that grow in rock outcrops and associated gravel soils, the following guidelines would be followed:
 - Trees would not be felled and equipment or vehicles would not be driven on rock outcrops or on thin, sandy or gravelly soils.
 - The District botanist would be consulted before cutting hand line through shallow, gravelly soils.

- Hand thinning of shrubs on rock outcrops or associated gravelly soils would be avoided unless approved by the District botanist.
 - Temporary road construction would not be allowed through areas of thin, gravelly soils until plant surveys of the proposed routes are complete, or the District botanist has approved the road location.
104. All off-road equipment used on this Project would be washed before moving into the Project area to ensure that the equipment is free of soil, seeds, vegetative material, or other debris that could contain or hold seeds of noxious weeds.
 105. Staging areas for equipment, materials, crews, or landings would be prohibited in areas with weed infestations. When working in known weed infested areas, equipment would be cleaned before moving to other areas which do not contain noxious weeds.
 106. Areas with weed infestations would be avoided during piling operations.
 107. Weed-free mulches and seed sources would be used. All activities that require seeding or planting would utilize locally collected native seed sources when possible. Plant and seed material should be collected from or near the Project area, from within the same watershed, and at a similar elevation when possible. Seed mixes must be approved by a FS botanist, noxious weed coordinator, or ecologist (Developing MOU with state of California).
 108. Weed infestation areas identified before or during Project implementation, within the treatment units or along travel routes near the treatment units, would be hand treated or "flagged and avoided".

GEOLOGY AND SOILS

109. A 100 foot wide buffer of 100 percent soil cover would be left below large rock outcrops to avoid potential runoff generated by these areas that can cause accelerated erosion on soils down slope.
110. Mechanical equipment operations would be conducted when the soil is sufficiently dry in the top 12 inches to prevent unacceptable loss of soil porosity (soil compaction). Field checking by a soil scientist would be done to determine if operations could continue under moist soil conditions. Ninety percent of the soil porosity over 85 percent of an activity area (stand) found under natural conditions would be maintained.
111. Skid roads and trails would be subsoiled and waterbarred in areas where soil compaction exceeds 15 percent of a treatment area.
112. Mechanical operations would be limited where sustained slopes exceed 35 percent, except where supported by on-the-ground IDT evaluation.
113. Over all treatment areas, a 50 percent soil cover would be maintained. Where shrub species predominate, they would be crushed before piling to create small woody fragments left scattered over the site for soil cover and erosion protection.
114. Road surface stabilization (gravel) would be provided for on roads over five percent grade that are located on sensitive soils, including Auberry family, Holland family, and Ultic Haploxeralf soils and are affecting soil productivity and/or water quality.
115. Tractor piling in watersheds with CWE concerns would be limited and a grapple piler would be used, especially on slopes greater than 25 percent.

CULTURAL RESOURCES

Procedures from the First Amended Regional Programmatic Agreement Among the USDA Forest Service, Pacific Southwest Region, California State Historic Preservation Officer, and Advisory Council on Historic Preservation Regarding the Process for Compliance with Section 106 of the National Historic Preservation Act for Undertakings on the National Forests of the Pacific Southwest Region (Regional PA) would be utilized for the management of cultural resources within the Project area. Cultural resources shall be protected from those Project activities which can adversely affect the significant values of the property through implementation of Standard Protection Measures of the Regional PA. Site specific protection measures are described in the cultural resources report for this Project (High Sierra Range District, September 2012).

116. Cultural resource sites would be excluded from all Project activities that could result in ground disturbance within their boundaries (e.g. the use of ground based mechanical equipment, piling and burning). Material would be allowed to be cut and removed by hand from within the boundaries of cultural resource sites.
117. Ground disturbing activities would be avoided in historic properties. Archaeological resources would be excluded from proposed Project activities that could result in ground disturbance within their boundaries (i.e. use of ground based mechanical equipment, planting, piling and burning, fire line construction, road construction, etc.).
118. Certain non-disturbing activities, those that lack the potential to adversely affect the character of historic properties, would be allowed within site boundaries. These include:
 - o Archaeological resources may not be “at risk” of effects from prescribed fire use. The standard resource protection measures would be applied only to those historic properties defined as “at risk” from the use of prescribed fire treatments.
 - o Mechanical shredding or removal of fuels inside of site boundaries with an articulated boom shredder/harvester would not affect the archaeological materials, provided the tracked or wheeled equipment stays outside of the delineated site boundary and the machine head does not contact the ground surface or site features. Removal of fuels by hand (manual thinning with chainsaws) would not affect archaeological materials.
119. Traditional cultural properties, locations of contemporary Native American gathering, and other such non-archaeological cultural resources identified through consultation with Native American tribes, individuals, and other interested parties would be protected through avoidance by Project activity, or managed through Project implementation and consultation to benefit the resource. For example, planned prescribed fire can have positive effects to regenerate growth in certain plant species used by Native Americans in basketry or traditional food preparation.
120. In the event of inadvertent effects of new discovery during implementation, the SNF would comply with the stipulations of the Regional PA.

ENGINEERING

121. All FS roads would be maintained to standards established in the FSH 7709.58. Road maintenance and reconstruction activities would be performed to support Project access needs. Drainage structures would be designed to be functional and stable to prevent potential resource damage and degradation of water quality. (BMPs 2.3 and 2.4).
122. A final field review of Project roads would be performed to determine reconstruction needs prior to Project activities. Where economically feasible, aggregate would be placed on existing native surface

roads located in areas with High and Very High Soil Erosion Hazard ratings. Aggregate would be required on road slopes greater than five percent in areas with these ratings.

123. Upon completion of use, all temporary roads required for unit access would be closed; culverts would be removed, landings would be ripped and ditched, waterbars would be constructed, the entrance to the road would be blocked with a log and dirt berm and disguised with brush to discourage additional traffic (BMPs 1.16, 1.17, 1.19, 2.3, 2.7, 2.13).

VISUAL RESOURCES

The following design criteria developed for scenery would aid in achieving the SNF LRMP VQO of Modification for the Project area and would be applied to areas highly visible (i.e. within view of a 300 foot distance) to Bretz Mill Campground, private property, Peterson Mill Road, and FS roads 10S02, 10S17, and 10S18, unless otherwise noted:

124. Fire lines would follow natural contours whenever possible. Underburning operations would be modified to minimize the amount of overstory mortality in consultation with the Forest landscape architect. Islands of unburned vegetation would be retained in some areas to increase visual interest and attract wildlife. The edges of the islands would be irregularly shaped, feathered and undulated to create a near-natural appearance.
125. Tree stumps would be cut to a maximum of six inch heights from the uphill side or as low as possible, except along FS road 10S17.
126. Where feasible, burn piles would be located in areas where they would not be highly visible from the areas listed above. Piles in these areas would burn with more than 90 percent consumption. If 90 percent consumption is not reached (and the remaining fuels still meet the fuels objectives), the remnant slash would be scattered throughout the site. Efforts would be made to burn these piles within three years during low-use recreation season to reduce impacts to forest visitors.
127. Where feasible, landings would be located in areas where they would not be highly visible from the areas listed above. When possible, landing sizes would be minimized and restricted to existing openings. Where landings are visible, efforts would be made to remove the landing piles within three years during low-use recreation season to reduce impacts to forest visitors.
128. In areas where skid trails and/or fuel break lines are highly visible, they would be rehabilitated so that they are not visually evident within three years.

SNAGS LESS THAN 30 INCHES DBH

The following design criteria (#1- #4), developed by the District silviculture assistant and wildlife biologist, would only be applied to snags less than 30 inches DBH that occur in areas being treated with the restoration thinning prescription. These design criteria would not apply to hazard trees; all trees considered hazards to improvements, human safety, or private property would be removed, regardless of size.

1. Within WUI defense zones, four of the largest snags per acre would be retained. In the case where there is a group of large snags, four of the largest snags within the group would be retained per acre.
2. Within WUI threat zones, five of the largest snags per acre would be retained. In the case where there is a group of large snags, five of the largest snags within the group would be retained per acre.

3. In areas outside of the WUI, six of the largest snags per acre would be retained. In the case where there is a group of large snags, six of the largest snags within the group would be retained per acre.
4. In addition to the snag retention levels listed above, additional snags with the following properties would be retained: evidence of known or potential cavities; broken top (for snags at least 15 inches DBH at the break and at least 30 feet tall); mistletoe or other abnormal witches broom formation or other unusual tree growth formations due to disease or insect damage; teakettle branches; forked top; or broken large branches.

REFORESTATION

5. Reforestation stocking would meet standards described in the SNF LRMP (S&Gs 101, 102, 107 –110). The release of existing plantations would meet the growth and stocking standards outlined in growth and yield tables (Oliver and Powers 1978).
6. Reforestation treatments would occur in openings deemed appropriate on the ground throughout the Project area. Areas where other design criteria do not allow the use of herbicides, but herbicide is thought to be necessary for successful reforestation, are not appropriate for reforestation treatments.

HERBICIDE USE

7. No herbicide spraying would occur within SMZs or RMAs (SNFPA S&G 97).
8. Spraying would be limited to periods when rain events are not predicted in the near future to allow for maximum absorption into soils (BMP 5.7).
9. Herbicide applications for treatment of vegetation (site preparation and release) and noxious weed control may not affect historic properties where the application of herbicides does not have the potential to affect access to or use of resources by Native Americans.

Appendix B

Best Management Practices

BEST MANAGEMENT PRACTICES FOR THE SOAPROOT RESTORATION PROJECT

BMP Name, Objective, and Direction	Applies to These Actions	Application to the Soaproot Restoration Project
<p>BMP 1-1 Timber Sale Planning Process: To incorporate water quality and hydrologic considerations into the timber sale planning process.</p>	<p>Commercial thinning, pre-commercial thinning</p>	<p>Implemented through the Riparian Conservation Objectives/Forest Plan Consistency report, specification of operational BMPs, Environmental Analysis including interdisciplinary team office and field discussions, and incorporation of water quality protection measures in the contracts for the Soaproot Restoration Project.</p>
<p>BMP 1-4 Use of Sale Area Maps (SAM) and/or Project Maps for Designating Water Quality Protection Needs: To ensure recognition and protection of areas related to water quality protection delineated on a SAM or project map.</p>	<p>Commercial thinning; mastication; mechanical piling; herbicide use; road maintenance and reconstruction</p>	<p>The contract administrator and contractor will review these areas on the ground prior to commencement of ground disturbing activities. Examples of water quality protection features that will be designated on the project map include:</p> <ol style="list-style-type: none"> 1. Location of streamcourses and riparian zones to be protected, including the width of the protection zone for each area. 2. Wetlands (meadows, lakes, springs, etc.) and other sensitive areas (such as shallow soils) to be protected. 3. Boundaries of harvest units, specified roads and roads where hauling activities are prohibited or restricted, areas of different skidding and/or yarding methods, including post-harvest fuels treatments, and water sources available for purchaser's use.
<p>BMP 1-5 Limiting the Operating Period of Timber Sale Activities: To ensure that the contractor conducts their operations, including erosion control work, road maintenance, and so forth, in a timely manner, within the time frame specified in the contract.</p>	<p>Commercial thinning; mastication; mechanical piling; herbicide use; road maintenance and reconstruction</p>	<p>The contract operation period will be limited to contract-specified periods when adverse environmental effects are not likely. The contract administrator will close down operations due to rainy periods, high water, or other adverse operating conditions in order to protect resources.</p>
<p>BMP 1-8 Streamside Management Zone Designation: To designate a zone along riparian areas, streams and wetlands that will minimize potential for adverse effects from adjacent management activities. Management activities within these zones are designed to improve riparian values.</p>	<p>All</p>	<p>Streamside management zones (SMZs) have been supplemented with RMAs and RCAs (USDA 2004) as described in Table 3, above. In SMZs, the constraints defined in Sierra Supplement No. 1 (USDA FS 1989) apply. This includes no self-propelled ground based equipment, a minimum groundcover of 50%, and shade canopy may not be modified in a way that affects stream temperature.</p> <p>Modifications to these guidelines are possible where site-specific needs exist, if the action is reviewed by the District Hydrologist or Aquatic Biologist.</p>

BMP Name, Objective, and Direction	Applies to These Actions	Application to the Soaproot Restoration Project
<p>BMP 1-9 Determining Tractor Loggable Ground: To minimize erosion and sedimentation resulting from ground disturbance of tractor logging systems.</p>	<p>Commercial thinning, mastication, mechanical piling</p>	<p>Limit ground skidding and machine piling with tractors to slopes less than 35% (LRMP S&G 125). Endlining can be used to remove logs from steeper slopes, and fuels may be grapple or hand piled. Ground disturbance on areas of shallow soils, notably soils adjacent and abutting to rock outcrops, will be avoided.</p>
<p>BMP 1-10 Tractor Skidding Design: By designing skidding patterns to best fit the terrain, the volume, velocity, concentration, and direction of runoff water can be controlled in a manner that will minimize erosion and sedimentation.</p>	<p>Commercial thinning</p>	<p>The sale administrator and contractor will designate all skid trails prior to ground disturbing activities. If uncertainty arises regarding potential resource impacts of skid trail location, consult with an earth science specialist (i.e., Hydrologist, Aquatic Biologist, or Soil Scientist).</p>
<p>BMP 1-12 Log Landing Location: To locate landings in such a way as to avoid watershed impacts and associated water quality degradation</p>	<p>Commercial thinning</p>	<p>For use of existing landings, follow the "Flow Chart" (Eddinger 2001). The following criteria are to be used by the Sale Administrator when evaluating all landings:</p> <ul style="list-style-type: none"> a. The cleared or excavated size of landings will not exceed that needed for safe and efficient skidding and loading operations. Trees considered dangerous will be removed around landings to meet the safety requirements of OSHA. b. Selected landing locations will involve the least amount of excavation and fill possible. Landings must be located outside of SMZs. c. Locate landings near ridges away from headwater swales in areas that will allow skidding without crossing stream channels, violating SMZs, or causing direct deposit of soil and debris to a stream. d. Locate landings where the least number of skid roads will be required, and sidecast can be stabilized without entering drainages or affecting other sensitive areas. Keep the number of skid trails entering a landing to a minimum. e. Position landings such that the skid road approach will be nearly level as feasible, to promote safety and to protect soil from erosion. f. Avoid excessive fills associated with landings constructed on old landslide benches. g. Construct stable landing fills or improve existing landings by using appropriate compaction and drainage specifications. <p>Any new landing sites proposed will be reviewed by the hydrologist and aquatic biologist.</p>

BMP Name, Objective, and Direction	Applies to These Actions	Application to the Soaproot Restoration Project						
<p>BMP 1-13 Erosion Prevention and Control Measures during Timber Sale Operations: To ensure that the purchasers' operations will be conducted reasonably to minimize soil erosion.</p>	<p>Commercial thinning, mastication, mechanical piling</p>	<p>Apply appropriate erosion prevention measures on all ground disturbing activities prior to fall storms (October 1) and immediately upon completion of activity begun after November 1 (LRMP S&G 127).</p> <p>Contractor responsibilities for erosion control will be set forth in the contract. Equipment will not be operated when ground conditions are such that excessive damage will result. The kinds and intensity of control work required of the purchaser will be adjusted by the sale administrator to ground and weather conditions with emphasis on controlling overland runoff, erosion, and sedimentation.</p> <p>Erosion control work required by the contract will be kept current. At certain times of the year this means daily, if precipitation is likely or weekly when precipitation is predicted for the weekend.</p> <p>If the purchaser fails to perform seasonal erosion control work prior to any seasonal period of precipitation or runoff, the Forest Service may temporarily assume responsibility, complete the work, and use any unencumbered deposits as payment for the work.</p>						
<p>BMP 1-16 Log Landing Erosion Protection and Control: To reduce the impacts of erosion and subsequent sedimentation associated with log landings by use of mitigating measures.</p>	<p>Commercial thinning,</p>	<p>Landings will be properly cross-ditched, ripped (if soils are compacted), re-contoured (as necessary), and mulched after use and before the winter precipitation period, whichever comes first. Excess material not needed for erosion control can be piled and burned. Upon completion of the project, consult with the Hydrologist or Soil Scientist to determine the need for additional soil protection measures in areas over threshold for cumulative watershed effects (CWEs).</p>						
<p>BMP 1-17 Erosion Control of Skid Trails: To protect water quality by minimizing erosion and sedimentation derived from skid trails.</p>	<p>Commercial thinning,</p>	<p>Erosion control measures will be installed on all skid trails and temporary roads. Erosion control measures include, but are not limited to, cross ditches (water bars), organic mulch, and ripping.</p> <p>Cross ditches will be spaced according to the guidelines below, maintained in a functioning condition, and placed in locations where drainage would naturally occur (i.e., swales). The level of maintenance will be contingent upon existing or predicted weather patterns as determined by the Sale Administer (see BMP 1-13).</p> <p style="text-align: center;">Maximum Cross Drain Spacing</p> <table border="1" data-bbox="805 1388 1320 1520"> <thead> <tr> <th data-bbox="805 1388 1062 1430">% Slope</th> <th data-bbox="1062 1388 1320 1430">Maximum Spacing</th> </tr> </thead> <tbody> <tr> <td data-bbox="805 1430 1062 1472">0 - 15</td> <td data-bbox="1062 1430 1320 1472">125 feet</td> </tr> <tr> <td data-bbox="805 1472 1062 1520">15 - 35</td> <td data-bbox="1062 1472 1320 1520">45 feet</td> </tr> </tbody> </table>	% Slope	Maximum Spacing	0 - 15	125 feet	15 - 35	45 feet
% Slope	Maximum Spacing							
0 - 15	125 feet							
15 - 35	45 feet							
<p>BMP 1-18 Meadow Protection during Timber Harvesting: To avoid damage to the ground cover, soil, and hydrologic function of meadows.</p>		<p>Mechanical equipment is not permitted in meadows unless specifically authorized by the District Aquatic Biologist and District Hydrologist.</p>						

BMP Name, Objective, and Direction	Applies to These Actions	Application to the Soaproot Restoration Project
<p>BMP 1-19 Streamcourse and Aquatic Protection: The objectives of this BMP are:</p> <ol style="list-style-type: none"> 1) To conduct management actions within these areas in a manner that maintains or improves riparian and aquatic values. 2) To provide unobstructed passage of stormflows. 3) To control sediment and other pollutants entering streamcourses. 4) To restore the natural course of any stream as soon as practicable, where diversion of the stream has resulted from timber management activities. 	<p>Commercial thinning, mastication, mechanical piling</p>	<ol style="list-style-type: none"> a. The location and method of crossings on Class IV and V streams must be agreed to by the sale administrator (SA) prior to construction. b. Stream crossings on Class I – III streams must be approved by the hydrologist and aquatic biologist. c. Damage to stream banks and channels will be repaired to the extent practicable. d. All sale-generated debris will be removed from streamcourses, unless otherwise agreed to by the SA, and in an agreed upon manner that will cause the least disturbance. e. No endlining in SMZs without site-specific approval by the District Hydrologist or Aquatic Biologist. f. Methods for protecting water quality while utilizing tractor skid trail design in stream course areas where harvest is approved include: (1) end lining, (2) falling to the lead, and (3) utilizing specialized equipment with low ground pressure such as feller buncher harvester. g. Water bars or other erosion control structures will be located so as to disperse concentrated flows and filter out suspended sediments prior to entry into streamcourse. h. Material from temporary road construction and skid trail stream crossings will be removed and streambanks restored to the extent practicable.
<p>BMP 1-20 Erosion Control Structure Maintenance: To ensure that constructed erosion control structures are stabilized and working.</p>	<p>Commercial thinning, mastication, mechanical piling</p>	<p>During the period of the timber sale contract, the purchaser will provide maintenance of soil erosion control structures contracted by the purchaser until they become stabilized, but not more than one year after their construction. If the purchaser fails to do seasonal maintenance work, the Forest Service may assume the responsibility and charge the purchaser accordingly. The Forest Service sale administrator is responsible for ensuring erosion control maintenance work is completed.</p>
<p>BMP 1-21 Acceptance of Timber Sale Erosion Control Measures before Sale Closure: To ensure the adequacy of required erosion control work on timber sales.</p>	<p>Commercial thinning</p>	<p>The sale administrator must inspect erosion control measures to ensure their adequacy prior to accepting closure on the unit and/or sale.</p> <p>The effectiveness of erosion control measures will be evaluated using BMPEP protocols after the sale area has been through one or more wet seasons. This evaluation is to ensure that erosion control treatments are in good repair and functioning as designed before releasing the purchaser from contract responsibility.</p> <p>The purchaser is responsible for repairing erosion control treatments that fail to meet criteria in the Timber Sale Contract, as determined by the Sale Administer, for up to one year past closure of the sale.</p>

BMP Name, Objective, and Direction	Applies to These Actions	Application to the Soaproot Restoration Project
<p>BMP 1-22 Slash Treatment in Sensitive Areas: To maintain or improve water quality by protecting sensitive areas from degradation which would likely result from using mechanized equipment for slash disposal.</p>	<p>Commercial thinning, pre-commercial thinning, piling</p>	<p>All burn piles made with mechanical equipment must be located outside of the SMZ.</p> <p>Hand piles will be kept at least 75 feet away from all perennial streams, meadows, springs, seeps, and other sensitive aquatic areas and outside the SMZ for seasonal streams, unless approved by the District Aquatic Biologist. Burn piles within SMZs will be lit utilizing no-toxic methods (i.e. propane lighters).</p>
<p>BMP 2-1 General Guidelines for the Location and Design of Roads: To locate and design roads with minimal resource damage.</p>	<p>Road construction (including temp roads)</p>	<p>The following considerations are incorporated into the planning process of road location and design (including temporary roads). These measures are preventative, apply to all transportation activities, and indirectly protect water quality:</p> <ul style="list-style-type: none"> a) Transportation facilities will be developed and operated to best meet the resource management objectives with the least adverse effect on environmental values. b) The location, design, and construction of roads will include the use of the IDT. c) Sensitive areas such as wetlands, inner gorges, and unstable ground will be avoided to the extent practicable. d) Stream crossings will be designed to provide the most cost efficient facility consistent with resource protection, facility needs, and legal obligations. <p>No temp roads will be constructed in SMZs unless approved by the hydrologist and aquatic species biologist.</p>
<p>BMP 2-3 Timing of Construction Activities: To minimize erosion by conducting operations during minimal runoff periods and when soils are dry and less prone to compaction.</p>	<p>Road maintenance or reconstruction, road construction (including temp roads)</p>	<p>Ground-disturbing activities will occur when soils are moist to dry. Ground-disturbing work that occurs off of existing roads will occur during the dry season and will reduce ground disturbance as much as possible.</p>
<p>BMP 2-5 Road Slope Stabilization Construction Practices: To reduce sedimentation by minimizing erosion from road slopes and slope failure along roads.</p>	<p>Road construction (including temp roads)</p>	<p>An adequate soils and geologic investigation will be conducted when finalizing new road construction designs for: correct cut and fill steepness based on the angle of repose for the type of material; methods to handle surface runoff; and necessary compaction standards and surfacing needs.</p>
<p>BMP 2-7 Control of Road Drainage: To minimize the erosive effects of water concentrated on roads, to disperse runoff from road surfaces, to lessen sediment yield from roaded areas, and to minimize erosion of the road prism.</p>	<p>Road maintenance or reconstruction, road construction (including temp roads)</p>	<p>Newly constructed or reconstructed roads will be designed to reduce hydrologic connectivity and soil erosion wherever feasible.</p> <p>The sale administrator or other Forest Service representative will ensure that roads are adequately maintained during project implementation to ensure that road drainage features function as designed.</p>

BMP Name, Objective, and Direction	Applies to These Actions	Application to the Soaproot Restoration Project
<p>BMP 2-8 Constraints Related to Pioneer Road Construction: To minimize sediment production and mass wasting from pioneer road construction.</p>	<p>Road construction (including temp roads)</p>	<ul style="list-style-type: none"> a. Roads will be constructed within the planned roadway limits unless otherwise specified or approved by the District Ranger and ER or COR. b. Pioneer roads will be located to prevent undercutting of the designated final cut slope, avoid deposition of materials outside the designated roadway limits, and accommodate drainage with temporary culverts or log crossings. c. Erosion control work will be completed prior to the rainy season and in accordance with the contract. d. Crossing sites on live streams will be dewatered during construction with diversion devices (see BMP 2-15).
<p>BMP 2-9 Timely Erosion Control Measures on Incomplete Roads and Stream Crossing Projects: To minimize erosion and sedimentation from disturbed ground on incomplete projects.</p>	<p>Road construction (including temp roads)</p>	<p>Erosion control must be completed before the rainy season (usually October in the Soaproot project area). Preventative measures for timely erosion control include:</p> <ul style="list-style-type: none"> a. Removal of temporary culverts, culvert plugs, diversion dams, or elevated stream crossings. b. Installation of temporary culverts, side drains, flumes, cross drains, diversion ditches, energy dissipaters, dips, sediment basins, berms, debris racks, or other facilities needed to control erosion. c. Removal of debris, obstructions, and spoil material from channels and floodplains. d. Planting vegetation, mulching, and/or covering exposed surfaces with jute mats or other protective material.
<p>BMP 2-10 Construction of Stable Embankments: To construct embankments with materials and methods which minimize the possibility of failure and subsequent water quality degradation.</p>	<p>Road maintenance or reconstruction, road construction (including temp roads)</p>	<p>Roadways will be designed and constructed as stable and durable earthwork structures with adequate strength to support the roadway, shoulders, subgrade and road traffic loads.</p>
<p>BMP 2-11 Control of Sidecast Material During Construction and Maintenance: To minimize sediment production originating from sidecast material during road construction or maintenance.</p>	<p>Road maintenance or reconstruction, road construction (including temp roads)</p>	<p>Sidecasting is not permitted in SMZs. Waste areas must be located where excess material can be deposited and stabilized.</p>

BMP Name, Objective, and Direction	Applies to These Actions	Application to the Soaproot Restoration Project
<p>BMP 2-12 Servicing and refueling equipment: To prevent pollutants such as fuels, lubricants, bitumens and other harmful materials from being discharged into or near rivers, streams and impoundments, or into natural or man-made channels.</p>	<p>Any mechanical equipment, including chainsaws</p>	<p>Storage of hazardous materials (including fuels) and servicing and refueling of equipment will be conducted at pre-designated locations outside of RCAs unless there is no other alternative.</p> <ol style="list-style-type: none"> 1. Any location in an RCA used for refueling must first be approved by the District Hydrologist or District Aquatic Biologist. 2. Site specific refueling plans for difficult terrain within the project area can be developed for refueling within an RCA if no other options are available. (ie: use of spill pad under chainsaw while refueling within RCA) 3. At a minimum, refueling must take place outside of SMZs.
<p>BMP 2-13 Control of Construction and Maintenance Activities Adjacent to SMZs: To protect water quality by controlling construction and maintenance actions within and adjacent to SMZs so that SMZ functions are not impaired.</p>	<p>Road maintenance or reconstruction, road construction (including temp roads)</p>	<p>Construction and maintenance fills, sidecast, and end-hauled materials will be kept out of SMZs except at designated crossing sites to minimize the effect to the aquatic environment.</p>
<p>BMP 2-14 Controlling In-Channel Excavation: To minimize stream channel disturbances and related sediment production.</p>		<p>There will be no in-channel or streambank excavation during any phase of project activities unless authorized by the District Hydrologist or Aquatic Biologist.</p>
<p>BMP 2-15 Diversion of Flows Around Construction Sites: To ensure that all stream diversions are carefully planned, to minimize downstream sedimentation, and to restore stream channels to their natural grade, condition, and alignment as soon as possible.</p>		<p>Streamflow must be diverted around construction sites such as bridges, culverts and dams. The streamflow will be diverted for all live streams according to the instructions of the ER. The diverted flows will be returned as soon as possible to their natural stream course as soon as possible after construction, or at least prior to the rainy season.</p> <p>This practice is required by contract clauses. The NEPA and design process will identify where diversion is necessary. Environmental analysis must identify beneficial uses and prevent unacceptable effects. Detailed mitigation will be developed in the design to meet project criteria.</p> <p>If diversions are necessary, consultation with the District Aquatic Biologist will occur prior to implementation.</p>
<p>BMP 2-16 Stream Crossings on Temporary Roads and Skid Trails: To ensure that temporary roads do not unduly damage stream channels and to ensure that fish passage is unimpeded by stream crossing structures</p>	<p>Commercial thinning, road reconstruction, road construction (including temp roads)</p>	<p>Mechanical equipment crossing of perennial and intermittent (generally class I – III) streams is not permitted unless approved by the District Hydrologist or Aquatic Biologist. Ephemeral streams (stream class IV and V) may be crossed at designated locations as agreed upon by the sale administrator and purchaser. Designate skid trails to avoid stream crossings and SMZs wherever possible. Designated crossings must be as perpendicular to the channel as possible and avoid sensitive soils and riparian vegetation damage. Stream banks must be repaired upon completion of the project.</p>

BMP Name, Objective, and Direction	Applies to These Actions	Application to the Soaproot Restoration Project
<p>BMP 2-19 Disposal of Right-of-Way and Roadside Debris: To ensure that organic debris generated during road construction is kept out of streams so that channels and downstream facilities are not obstructed.</p>	<p>Road maintenance or reconstruction, road construction (including temp roads)</p>	<p>If slash generated by road work is disposed of within SMZs, it will be piled and burned or chipped. Material may also be removed from the SMZ for disposal.</p>
<p>BMP 2-21 Water Source Development Consistent with Water Quality Protection: To supply water for roads and fire protection while maintaining existing water quality.</p>	<p>Water drafting for any purpose (other than initial attack on a wildfire)</p>	<ul style="list-style-type: none"> a. Water drafting candidate sites should be selected by the Sale Administrator and approved by the Hydrologist and Aquatic Biologist. b. Water drafting sites should be at least 500 feet to 0.6 miles away from occupied aquatic species habitat (as determined by the Aquatic Biologist). (ROD S&G 92, 96,103,101, 110) c. Drafting sites shall be visually surveyed for frogs and their eggs before drafting begins. d. Use a screened intake device and pumps with low entry velocity and suction strainers with screen less than 2mm (1/8 in) in size to minimize removal of aquatic species, including juvenile fish, amphibian egg masses and tadpoles, from aquatic habitats. (ROD S&G 110) e. The suction strainer shall be inserted close to the substrate in the deepest water available and placed in a canvas bucket to avoid substrate and aquatic species disturbance. f. No drafting will occur unless immediate downstream discharge from drafting site is maintained at 1.5 cfs or greater. (LRMP S&G 43) g. Water drafting will not remove more than 50% of any stream's ambient discharge that is over 1.5 cfs. (LRMP S&G 43)
<p>BMP 2-22 Maintenance of Roads: To maintain roads in a manner that provides for water quality protection by minimizing rutting, failures, sidecasting, and blockage of drainage facilities, all of which can cause erosion, sedimentation, and deteriorating watershed conditions.</p>	<p>Road maintenance or reconstruction</p>	<p>Roads needed for project activities will be brought to current engineering standards of alignment, drainage, and grade before use, and will be maintained through the life of the project. Roads will be inspected at least annually to determine what work, if any, is needed to keep ditches, culverts, and other drainage facilities functional and the road stable.</p>
<p>BMP 2-23 Road Surface Treatment to Prevent Loss of Materials:</p>	<p>Road maintenance or reconstruction</p>	<p>Surface stabilization will be considered where grades exceed 12% or where the road is in an RCA.</p>

BMP Name, Objective, and Direction	Applies to These Actions	Application to the Soaproot Restoration Project
<p>BMP 2-24 Traffic Control During Wet Periods: To reduce road surface disturbance and the rutting of roads, and to minimize sediment washing from disturbed road surfaces.</p>	<p>Access for all project activities</p>	<p>On roads not designated for all weather use, operations will be limited during the wet season to periods when the soil is sufficiently dry to support site access without damage to the road surface or drainage structures.</p>
<p>BMP 2-26 Obliteration or Decommissioning of Roads: To reduce sediment generated from temporary roads, unneeded system and non-system roads by obliterating or decommissioning them at the completion of the intended use.</p>	<p>Temp roads; any other identified decommissioning</p>	<p>Temporary roads will be obliterated after serving their intended purpose for this project. This includes: (1) road effectively barricaded; (2) road effectively drained by measures such as re-contouring or outsloping to return surface to near natural hydrologic function; (3) a well distributed mulch or organic cover provides at least 50% cover, or road surface is revegetated using local native species; (4) sideslopes are reshaped and stabilized to match the natural contour (as necessary); and (5) stream crossings are removed and natural channel geometry is restored.</p> <p>If non-local mulch is used (such as straw), it must be approved by the Forest Service as weed free.</p>
<p>BMP 5-7 Pesticide Use Planning Process: To introduce water quality and hydrologic considerations into the pesticide use planning process.</p>	<p>Herbicide Use</p>	<p>BMPs 5-8 through 5-14 are considered for incorporation into the project in order to protect water quality.</p> <p>These considerations are incorporated into the discussion of effects in the NEPA document.</p>
<p>BMP 5-8 Pesticide Application According to Label Directions and Applicable Legal Requirements: To avoid water contamination by complying with all label instructions and restrictions for use.</p>	<p>Herbicide Use</p>	<p>This BMP requires glyphosate applicators to strictly adhere to pesticide label instructions.</p>
<p>5-10 Pesticide Spill Contingency Planning: To reduce contamination of water by accidental pesticide spills.</p>	<p>Herbicide Use</p>	<p>A Pesticide Spill Contingency Plan is prepared, consisting of predetermined actions to be taken in the event of a pesticide spill. The plan identifies who to contact, timeframe for notifications, guidelines for spill containment, and responsibility for cleanup. This is to be included in the project safety plan.</p>
<p>BMP 5-11 Cleaning and Disposal of Pesticide Containers and Equipment: To prevent water contamination resulting from cleaning or disposal of pesticide containers.</p>	<p>Herbicide Use</p>	<p>The cleaning and disposal of glyphosate containers will be done in accordance with Federal, State, and local laws, regulations and directives.</p>

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<p>BMP 5-12 Streamside Wet Area Protection During Pesticide Spraying: To minimize the risk of pesticide inadvertently entering waters, or unintentionally altering the riparian area, SMZ, or wetland.</p>	Herbicide Use	When spraying glyphosate, an untreated strip of land and vegetation will be left alongside surface waters, wetlands, riparian areas, or SMZ. Strip widths established by the IDT are 5 feet for dry channels and 25 feet for flowing channels
<p>BMP 5-13 Controlling Pesticide Drift During Spray Application: To minimize the risk of pesticide falling directly into water, or non- target areas.</p>	Herbicide Use	The spray application of pesticide includes a prescription accounting for terrain that specifies the following: spray exclusion areas; buffer areas; factors such as formulation, equipment, droplet size, spray height, application pattern, flow rate; and limiting factors for wind speed and direction, temperature, and relative humidity.
<p>BMP 6-2 Consideration of Water Quality in Formulating Fire Prescriptions: To provide for water quality protection while achieving the management objectives through the use of prescribed fire.</p>	Underburning or pile burning	Each Burn Plan will incorporate all relevant design measures from the analysis and will be reviewed by the IDT.
<p>BMP 6-3 Protection of Water Quality from Prescribed fire Effects: To maintain soil productivity, minimize erosion, and minimize ash, sediment, nutrients, and debris from entering water bodies.</p>	Underburning or pile burning	<p>Piles will be located far enough away from any perennial stream channel or other special aquatic feature as to not impact those features, and outside the SMZ for seasonal channels unless approved by the District Aquatic Biologist. (Aquatic species design criteria specify greater distances in threatened, endangered, candidate or Forest Service sensitive species habitats.)</p> <p>Any fire lines in an RCA will be designed and constructed to reduce sediment entry into channels. They will follow the natural landscape contour as much as possible, and will be water barred per BMP 1-17 spacing requirements.</p> <p>Any fire lines in the SMZ will be hand cut. They will cross perpendicular to streams, and waterbars will be placed on either side of each stream crossing to prevent or reduce sediment entry into streams.</p>
<p>BMP 7-3 Protection of Wetlands: To avoid adverse water quality impacts associated with destruction, disturbance, or modification of wetlands.</p>	All project- related activities	Ground disturbing activities will not occur in wetlands or meadows.

BMP Name, Objective, and Direction	Applies to These Actions	Application to the Soaproot Restoration Project
<p>BMP 7-4 Oil and Hazardous Substance Spill Contingency Plan and Spill Prevention and Countermeasure (SPCC) Plan: To prevent contamination of water from accidental spills.</p>	<p>All activities involving oil or other hazardous materials</p>	<p>A spill contingency plan and spill prevention and countermeasure plan (SPCC) must be prepared if hazardous materials (including fuels and oils) stored on the Sierra National Forest exceed 1320 gallons, or if a single container exceeds 660 gallons.</p> <p>The plan will at a minimum include: the types and amounts of hazardous materials located in the project area, pre-project identified locations for hazardous materials storage and fueling/maintenance activities (must be located outside of RCA and CAR unless prior approval by District Hydrologist or Aquatic Biologist is obtained), methods for containment of hazardous materials and contents of on-site emergency spill kit, and a contingency plan (including contact names with phone numbers) to implement in the event of a spill.</p> <p>The SPCC plan must be approved by the Forest Service prior to project implementation.</p>

MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATION MONITORING REQUIREMENTS AND PROCEDURES

The California Environmental Quality Act (CEQA) was amended in 1989 to add Section 21081.6, which requires a public agency to adopt a monitoring and reporting program for assessing and ensuring compliance with any required mitigation measures applied to a proposed development. As stated in Section 21081.6 of the Public Resources Code,

“... the public agency shall adopt a reporting or monitoring program for the changes to the project which it has adopted, or made a condition of project approval, in order to mitigate or avoid significant effects on the environment.”

Section 21081.6 provides general guidelines for implementing mitigation monitoring programs and indicates that specific reporting and/or monitoring requirements, to be enforced during project implementation, shall be defined prior to final adoption of the Initial Study/Mitigation Monitoring and Reporting Program (IS/MND).

The mitigation monitoring table below lists those mitigation measures that may be included as conditions of approval for the project. To ensure that the mitigation measures are properly implemented, a monitoring program has been devised which identifies the timing and responsibility for monitoring each measure. The applicant (U.S. Forest Service, Sierra National Forest, High Sierra Ranger District) will have the primary responsibility for implementing the measures, and primary responsibility for monitoring and reporting the implementation of the mitigation measures. The Sierra Nevada Conservancy (SNC) will have the secondary responsibility monitoring and reporting the implementation of the mitigation measures.

**Soaproot Stewardship Project (SNC 786)
Mitigation Monitoring and Reporting Program**

Mitigation Measure	Responsible Party or Parties	Timing for Mitigation Measure	Method of Verification	Verification of Compliance (Date/Initials)
I. Aesthetics				
The proposed project would not result in significant adverse impacts related to aesthetic resources. No mitigation is required.				
II. Agricultural Resources				
The proposed project would not result in significant adverse impacts related to agricultural resources. No mitigation is required.				
III. Air Quality				
The proposed project would not result in significant adverse impacts related to air quality. No mitigation is required.				
IV. Biological Resources				
The proposed project would not result in significant adverse impacts related to biological resources. No mitigation is required.				
V. Cultural Resources				
CULT-1 If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the Fresno County coroner. All reports, correspondence, and determinations regarding the discovery of human remains on the project site shall be submitted to the Sierra Nevada Conservancy and the High Sierra Ranger District. According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and willful disturbance of	Sierra Nevada Conservancy; U.S. Forest Service (High Sierra Ranger District); Project Contractor; Qualified Archaeologist	During Construction and Ground-Disturbing Activities	Onsite Inspection Separate Submittal - reports, studies, plans	

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Mitigation Monitoring and Reporting Program**

Mitigation Measure	Responsible Party or Parties	Timing for Mitigation Measure	Method of Verification	Verification of Compliance (Date/Initials)
<p>human remains is a felony (Section 7052).</p> <p>CULT-2 During any ground disturbance activities, if paleontological resources are encountered, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the <i>Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources</i> (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County regarding any discoveries of paleontological resources.</p> <p>If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Sierra Nevada Conservancy and the High Sierra Ranger District.</p>	<p>Sierra Nevada Conservancy; U.S. Forest Service (High Sierra Ranger District); Project Contractor; Qualified Paleontologist</p>	<p>During Construction and Ground-Disturbing Activities</p>	<p>Onsite Inspection Separate Submittal - reports, studies, plans</p>	

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Mitigation Monitoring and Reporting Program**

Mitigation Measure	Responsible Party or Parties	Timing for Mitigation Measure	Method of Verification	Verification of Compliance (Date/Initials)
<p>CULT-3 If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, can evaluate the significance of the find and make recommendations. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified professional archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations may be required to mitigate adverse impacts from project implementation. These additional studies may include avoidance, testing, and evaluation or data recovery excavation.</p> <p>If a potentially-eligible resource is encountered, then the qualified professional archaeologist, the Sierra Nevada Conservancy, and the High Sierra Ranger District shall arrange for either 1) total avoidance of the resource or 2) test excavations to evaluate eligibility and, if eligible, total data recovery. The determination shall be formally documented in writing and submitted to the Sierra Nevada Conservancy and High Sierra Ranger District as verification that the provisions for managing unanticipated discoveries have been met.</p>	<p>Sierra Nevada Conservancy; U.S. Forest Service (High Sierra Ranger District); Project Contractor; Qualified Archaeologist</p>	<p>During Construction and Ground-Disturbing Activities</p>	<p>Onsite Inspection Separate Submittal - reports, studies, plans</p>	
<p>VI. Geology and Soils</p>				
<p>The proposed project would not result in significant adverse impacts related to geology or soils. No mitigation is required.</p>				
<p>VII. Greenhouse Gas Emissions</p>				
<p>The proposed project would not result in significant adverse impacts related to greenhouse gas emissions. No mitigation is required.</p>				

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Mitigation Measure	Responsible Party or Parties	Timing for Mitigation Measure	Method of Verification	Verification of Compliance (Date/Initials)
VIII. Hazards and Hazardous Materials				
The proposed project would not result in significant adverse impacts related to hazards and hazardous materials. No mitigation is required.				
IX. Hydrology and Water Quality				
The proposed project would not result in significant adverse impacts related to hydrology and water quality. No mitigation is required.				
X. Land Use and Planning				
The proposed project would not result in significant adverse impacts related to land use and planning. No mitigation is required.				
XI. Mineral Resources				
The proposed project would not result in significant adverse impacts related to mineral resources. No mitigation is required.				
XII. Noise				
The proposed project would not result in significant adverse impacts related to noise. No mitigation is required.				
XIII. Population and Housing				
The proposed project would not result in significant adverse impacts related to population and housing. No mitigation is required.				
XIV. Public Services				
The proposed project would not result in significant adverse impacts related to public services. No mitigation is required.				
XV. Recreation				
The proposed project would not result in significant adverse impacts related to recreation. No mitigation is required.				
XVI. Transportation				
The proposed project would not result in significant adverse impacts related to transportation. No mitigation is required.				
XVII. Utilities and Service Systems				
The proposed project would not result in significant adverse impacts related to utilities and service systems. No mitigation is required.				