Initial Study/Mitigated Negative Declaration: Lilly Gap Forest Health Project, Phase 2

Lead Agency

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

July 2014

NOTICE OF INTENT
TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR THE PROPOSED LILLY GAP FOREST HEALTH PROJECT, PHASE 2

Public Notice is hereby given that an Initial Study and Draft Mitigated Negative Declaration (IS/MND) is available for public review for the Lilly Gap Forest Health Project, Phase 2.

Project Location: The proposed project is located on 200 acres within the overall 420-acre Lilly Gap Forest Health Project located on United States Department of the Interior, Bureau of Land Management (BLM) administered public lands. The proposed project is adjacent to the Mokelumne River, located off of Lily Gap Road/Winton Road, approximately two miles northeast of the town of West Point, in the central Sierra Nevada foothills, Calaveras County, California. The parcel is located within the Wildland Urban Interface. Township (T) 7 North (N), Range (R) 13 East (E), Section 25, Mount Diablo Base and Meridian. Latitude / Longitude: 38.430216 / -120.451233.

Project Description: The BLM is requesting approximately $185,000 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 the risk of large damaging wild fires, thereby preventing erosion and enhancing overall forest health in the Lilly Gap area in the Sierra National Forest. The proposed project is the second phase of the 420-acre Lilly Gap Forest and Watershed Health Project, and is part of the Lilly Gap Biomass Demonstration Project (CA-180-10-25) for fuels reduction and ecosystem restoration for watershed protection. The total 420-acre Lilly Gap project area is located on BLM administered public lands on forested slopes adjacent to the Mokelumne River that has not experienced fire in decades. This proposed project would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth.

BLM intends to recreate pre-suppression conditions, increase resiliency to future wildfires to reduce the risk of a large damaging fire, and thereby prevent erosion and enhance forest health within the Mokelumne River Watershed. Phase 1, a 157 acre treatment area, was completed in July 2013. Phase 2 (the proposed project) includes 200 acres of fuel reduction within the overall 420 Lilly Gap. Treatment methods include the use of a brush chipper with pile burning (on approximately 100 acres) and mechanical mastication (on approximately 100 acres). Harvest of material for woody biomass utilization such as in electric power generation and as shavings for animal bedding would occur throughout the project area where it is most economically feasible. The proposed project would also provide a demonstration of a dozer and brush rake to pile vegetation, all in a manner that minimizes new ground disturbance and erosion, prevents the spread of weeds and retains coarse woody debris for wildlife habitat. All treatments would conform to the recommendations of the United States Forest Service's General Technical Report 220, An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests. Refer to Section 2.0, *Project Description*, of the Initial Study for a detailed project description.

Document Review and Availability: The public comment period begins July 9, 2014 and extends to August 7, 2014. Copies of the IS/MND are available for public review at the following two (2) Calaveras County Library branches:

San Andreas Central Library
1299 Gold Hunter Road
San Andreas, CA 95249

West Point Branch Library
291 Main Street
West Point, CA 95255

The IS/MND can also be reviewed and/or downloaded from the Sierra Nevada Conservancy website at the following link: http://www.sierranevada.ca.gov/other-assistance/sncgrants/docs/794CEQA.pdf/.

During the public review period, written comments on the IS/MND 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

DRAFT MITIGATED NEGATIVE DECLARATION

Project Title: Lilly Gap Forest Health Project, Phase 2 (SNC 794)

Project Location: The proposed project is located on 200 acres within the overall 420-acre Lilly Gap Forest Health Project located on United States Department of the Interior, Bureau of Land Management (BLM) administered public lands. The proposed project is adjacent to the Mokelumne River, located off of Lily Gap Road/Winton Road, approximately two miles northeast of the town of West Point, in the central Sierra Nevada foothills, Calaveras County, California. The parcel is located within the Wildland Urban Interface. Township (T) 7 North (N), Range (R) 13 East (E), Section 25, Mount Diablo Base and Meridian. Latitude / Longitude: 38.430216 / -120.451233.

Date: July 9, 2014

Project Applicant: United States Department of the Interior, Bureau of Land Management, Mother Lode Field Office.

Lead Agency: Sierra Nevada Conservancy

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

Project Description: The BLM is requesting approximately $185,000 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 the risk of large damaging wild fires, thereby preventing erosion and enhancing overall forest health in the Lilly Gap area in the Sierra National Forest. The proposed project is the second phase of the 420-acre Lilly Gap Forest and Watershed Health Project, and is part of the Lilly Gap Biomass Demonstration Project (CA-180-10-25) for fuels reduction and ecosystem restoration for watershed protection. The total 420-acre Lilly Gap project area is located on BLM administered public lands on forested slopes adjacent to the Mokelumne River that has not experienced fire in decades. This proposed project would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth.

BLM intends to recreate pre-suppression conditions, increase resiliency to future wildfires to reduce the risk of a large damaging fire, and thereby prevent erosion and enhance forest health within the Mokelumne River Watershed. Phase 1, a 157 acre treatment area, was completed in July 2013. Phase 2 (the proposed project) includes 200 acres of fuel reduction within the overall 420-acre project site. Treatment methods include the use of a brush chipper with pile burning (on approximately 100 acres) and mechanical mastication (on approximately 100 acres). Harvest of material for woody biomass utilization such as in electric power generation and as shavings for animal bedding would occur throughout the project area where it is most economically feasible. The proposed project would also provide a demonstration of a dozer and brush rake to pile vegetation, all in a manner that minimizes new ground disturbance and erosion, prevents the spread of weeds and retains coarse woody debris for wildlife habitat. All treatments would conform to the recommendations of the United States Forest Service's General Technical Report 220, An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests. Refer to Section 2.0, *Project Description*, of the Initial Study 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 the Sierra Nevada Conservancy proposes that a Mitigated Negative Declaration be adopted. 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 significant negative or adverse effect on the environment.*
f) *The project incorporates mitigation measures identified in the initial study and the Lilly Gap Demonstration Project Environmental Assessment/Finding of No Significant Impact prepared by the United States Department of the Interior, Bureau of Land Management, Mother Lode Field Office.*
g) *This mitigated negative declaration reflects the independent judgment of the lead agency.*

Written comments on the initial study and proposed Mitigated Negative Declaration shall be submitted no later than August 7, 2014.

Submit comments 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:

Lilly Gap Forest Health Project, Phase 2 (SNC 794)

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, Senior Grants Analyst (530) 823-4698

4. Project Location:

The proposed project is located on 200 acres within the overall 420-acre Lilly Gap Forest Health Project located on United States Department of the Interior, Bureau of Land Management (BLM) administered public lands. The proposed project is adjacent to the Mokelumne River, located off of Lily Gap Road/Winton Road, approximately two miles northeast of the town of West Point, in the central Sierra Nevada foothills, Calaveras County, California. The parcel is located within the Wildland Urban Interface. Township (T) 7 North (N), Range (R) 13 East (E), Section 25, Mount Diablo Base and Meridian. Latitude / Longitude: 38.430216 / -120.451233.

5. Project Sponsor's Name and Address:

United States Department of the Interior
Bureau of Land Management
Mother Lode Field Office
5152 Hillsdale Circle
El Dorado Hills, CA 95762

6. General Plan Designation:

Natural Resource Land: Timber-Mineral Resource Area, 2A-Dam Inundation

7. Zoning:

Unclassified (U)

8. Description of Project:

The BLM is requesting approximately $185,000 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 the risk of large damaging wild fires, thereby preventing erosion and enhancing overall forest health in the Lilly Gap area in the Sierra National Forest. The proposed project is the second phase of the 420-acre Lilly Gap Forest and Watershed Health Project, and is part of the Lilly Gap Biomass Demonstration Project (CA-180-10-25) for fuels reduction and ecosystem restoration for watershed protection. The total 420-acre Lilly Gap project area is located on BLM administered public lands on forested slopes adjacent to the Mokelumne River that has not experienced fire in

decades. This proposed project would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth.

BLM intends to recreate pre-suppression conditions, increase resiliency to future wildfires to reduce the risk of a large damaging fire, and thereby prevent erosion and enhance forest health within the Mokelumne River Watershed. Phase 1, a 157 acre treatment area, was completed in July 2013. Phase 2 (the proposed project) includes 200 acres of fuel reduction within the overall 420 Lilly Gap. Treatment methods include the use of a brush chipper with pile burning (on approximately 100 acres) and mechanical mastication (on approximately 100 acres). Harvest of material for woody biomass utilization such as electric power generation and as shavings for animal bedding would occur throughout the project area where it is most economically feasible. The proposed project would also provide a demonstration of a dozer and brush rake to pile vegetation, all in a manner that minimizes new ground disturbance and erosion, prevents the spread of weeds and retains coarse woody debris for wildlife habitat. All treatments would conform to the recommendations of the United States Forest Service's General Technical Report 220, An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests. Refer to Section 2.0, *Project Description*, for a detailed project description.

Due to the proposed project area's relatively low elevation (approximately 3,500 feet above mean sea level), the proposed project would be implemented after the end of the fire season, generally between mid-fall and late spring. The anticipated start date is late 2014 and would continue over a two year period, with completion by Spring 2016. Final site cleanup and restoration would occur by June 2016.

9. Surrounding Land Uses and Setting:

The proposed project is within BLM-administered lands off of Winton Road, north of the community of West Point referred to as the Lilly Gap area. Much of this area has not experienced wildfire in decades. Shrub stands have aged and now contain a larger proportion of dead fuels, and in some forest stands understory fuels have increased, creating unhealthy forest conditions and making the probability that the area will experience a devastating wildfire more likely. At the same time, the local communities have grown. There are now numerous private residences in the area, many of them adjacent to the BLM-administered parcels containing dense fuels. The Lilly Gap area is considered to be within the Wildland Urban Interface and the local communities are considered "at risk."

10. Other public agencies whose approval is required:

United States Department of the Interior, Bureau of Land Management*
Calaveras County Air Pollution Control District
*Approved the Environmental Assessment/Finding of No Significant Impact (NEPA) in 2011

1.2 PROJECT BACKGROUND AND PREVIOUS ENVIRONMENTAL DOCUMENTATION

1.2.1 Project Background

The overall Lilly Gap Forest Health Project (Phase 1 and Phase 2) has been approved by the U.S. Department of the Interior (DOI) Bureau of Land Management (BLM) and endorsed by the Amador Calaveras Consensus Group (ACCG), a forest collaborative that has implemented numerous healthy forest projects with the participation of federal and state agencies, local jurisdictions, non-governmental organizations and private businesses. The Lilly Gap Forest Health Project is consistent

with the ACCG's All Lands - Triple Bottom Line approach, as well as the Amador Calaveras Cooperative Association for Biomass Utilization's community economic development work.

The proposed project is also a key component of the watershed health strategy currently being developed by the interagency Mokelumne Avoided Cost Analysis (MACA) team. The MACA team consists of a diverse group of stakeholders that include land managers (United States Forest Service, Bureau of Land Management, Sierra Pacific Industries), water and electric utilities (East Bay Municipal Utility District, Pacific Gas & Electric, California Department of Water Resources, California Department of Forestry and Fire Protection, and county governments), environmental organizations (Sustainable Conservation, Environmental Defense Fund), and local stakeholders (Foothill Conservancy, ACCG, West Point Fire District), and is led by the United States Forest Service, Sierra Nevada Conservancy, and the Nature Conservancy.[1] MACA's purpose is to determine how upper Mokelumne River watershed conditions affect forest health, fire risk, erosion potential and other factors directly impacting water users, including major utilities. The MACA team identified a number of agency projects that could improve the health of surrounding forests, reduce erosion and fire risk and thereby improve water quality and protect related infrastructure. The proposed project is one of the projects being considered by the MACA team. It is located in an area in need of immediate forest treatments to provide for the protection and restoration of the Mokelumne River drainage, lakes and reservoirs along the river, and other natural resources within the watershed.

1.2.2 Previous Environmental Documentation

The United States Department of Interior, Bureau of Land Management, Mother Lode Field Office acted as Lead Agency under the National Environmental Policy Act (NEPA) in March 2011 and prepared an Environmental Assessment (EA) and adopted a Finding of No Significant Impact (FONSI) and a Decision Record in May 2011. This Initial Study and Draft Mitigated Negative Declaration (IS/MND) relies on the BLM EA/FONSI and Record of Decision for the Lilly Gap Project (addressing Phase 1 and Phase 2), and the following environmental documentation, included in the Sierra Nevada Conservancy files:

- *Botanical Resources Inventory Report for the Lilly Gap Fuels Reduction and Biomass Project*, August 25, 2010.
- *Section 106 Compliance for the Lilly Gap Biomass Demonstration Project Memorandum (BLM Case # CA-018-S-AC-10/05)*, October 29, 2010. (CONFIDENTIAL)
- *Lilly Gap Biomass Demonstration Project Environmental Assessment (CA-180-10-25)*, April 2011
- *Lilly Gap Biomass Demonstration Project Finding of No Significant Impact (CA-180-10-25)*, signed May, 2, 2011.
- *Lilly Gap Biomass Demonstration Project (CA*-180-10-25) *Decision Record*, signed May 2, 2011.
- *Sierra Resource Management Plan (RMP)/Final Impact Statement (EIS),* Publication Index No.: BLM/CA/ES-2007-013+1790OEPC EIS Control No.: FES 07-18, May 2007.
- *Biological Resources Inventory Report for the Lilly Gap Fuels Reduction and Biomass Project,* May 15, 2014.
- *Supplemental Botanical Resources Inventory Report for the Lilly Gap Fuels Reduction and Biomass Project,* May 19, 2014.

[1] Buckley, M., N. Beck, P. Bowden, M. E. Miller, B. Hill, C. Luce, W. J. Elliot, N. Enstice, K. Podolak, E. Winford, S. L. Smith, M. Bokach, M. Reichert, D. Edelson, and J. Gaither. 2014. "Mokelumne watershed avoided cost analysis: Why Sierra fuel treatments make economic sense." A report prepared for the Sierra Nevada Conservancy, The Nature Conservancy, and U.S. Department of Agriculture, Forest Service. April 10, 2014. *Sierra Nevada Conservancy.* Auburn, California. Online: http://www.sierranevadaconservancy.ca.gov/mokelumne.

2.0 PROJECT DESCRIPTION

The proposed project is located on 200 acres within the larger 420-acre Lilly Gap Forest Health Project. This total 420 acre project area is located on United States Department of the Interior, Bureau of Land Management (BLM) administered public lands on forested slopes adjacent to the Mokelumne River in unincorporated Calaveras County, California. The project site is located off of Lily Gap Road/Winton Road, approximately two miles north east of the town of West Point, in the central Sierra Nevada foothills. The proposed project would allow BLM to address 200 acres immediately to the north of the Lilly Gap Forest Health Project Phase 1 site.

BLM intends to recreate pre-suppression conditions, increase resiliency to future wildfires to reduce the risk of a large damaging fire, and thereby prevent erosion and enhance forest health within the Mokelumne River Watershed. Phase 1, a 157 acre treatment area, was completed in July 2013. Phase 2 (the proposed project) includes 200 acres of fuels reduction. Treatment methods include the use of a brush chipper with pile burning (on approximately 100 acres) and mechanical mastication (on approximately 100 acres). Harvest of material for woody biomass utilization such as in electric power generation and as shavings for animal bedding would occur throughout the project area where it is most economically feasible. The proposed project would also provide a demonstration of a dozer and brush rake to pile vegetation, all in a manner that minimizes new ground disturbance and erosion, prevents the spread of weeds, and retains coarse woody debris for wildlife habitat. All treatments would conform to the recommendations of the United States Forest Service's General Technical Report 220, An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests.

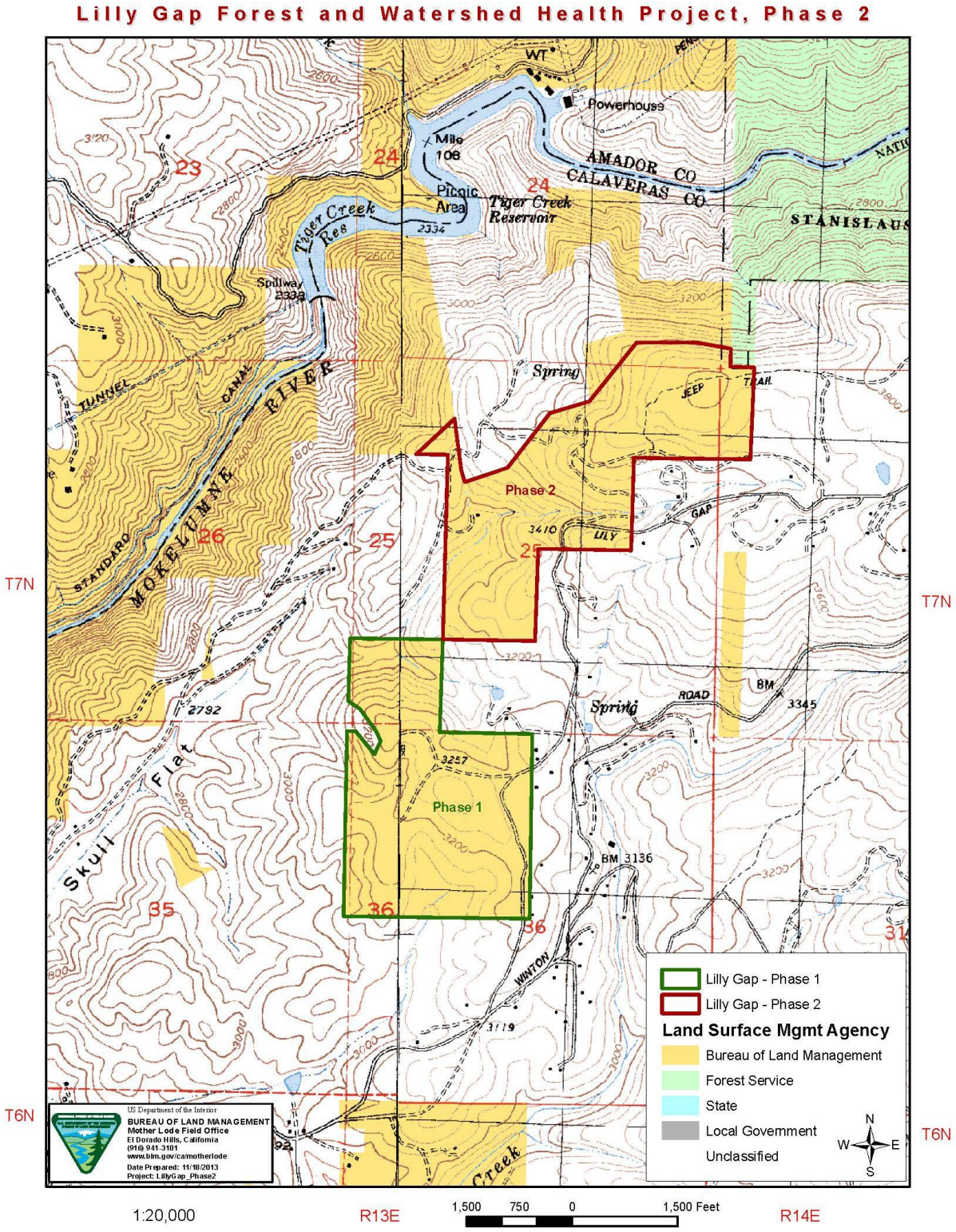
Due to the proposed project area's relatively low elevation (approximately 3,500 feet), the proposed project would be implemented after the end of the fire season, generally between mid-fall and late spring. The anticipated start date is late 2014 and would continue over a two year period, with completion by Spring 2016. Final site cleanup and restoration would occur by June 2016.

2.1 TREATMENTS

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 Interface. 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.

BLM proposes to treat Lilly Gap as a "demonstration project," that is, as a venue for applying a variety of different treatment methods to determine which are the most ecologically effective and economically feasible. Regardless of the treatment method demonstrated, the goal would be to create healthy forest conditions within the project area by applying the management ideas of North et al. (2009) (see Appendix A). All treatment methods would be conducted in accordance with the Silvicultural Prescriptions described in Appendix A, as well as those discussed in the United States Forest Service's General Technical Report 220.

Figure 2-1. Project Vicinity and Location Map
(Source: BLM Mother Lode Field Office)



2.1.1 Silvicultural Strategy

The silvicultural strategy laid out in Appendix A would be applied to all portions of the project area that have the characteristics of a Sierran mixed-conifer/lower montane forest type. Dead and decadent stands of manzanita and other brush would be removed. All oaks would be retained regardless of canopy position unless they constitute a potential ladder fuel. Other tree species such as madrone and dogwood would be left to create diversity.

Most conifers less than 8 inches diameter at breast height (DBH) would be removed, although a full range of conifer size and age classes would be maintained as part of the treatment. This includes the dense thickets of incense-cedar and pine. Some conifers less than eight inches DBH would be retained to ensure that a full range of size and age classes would be represented. Large pines and groups of large pines would be retained, with strategic clearing of potential ladder fuels around them to give them additional protection and to create some open gaps in the canopy. This means that some trees greater than 8 inches DBH would be removed if they are potential ladder fuels and to decrease overall stand density. Any conifers greater than 8 inches DBH that are to be removed to protect the larger "leave" trees and tree clusters would be marked by a BLM forester or fuels specialist. The cut trees would be sold at their highest and best use. Trees larger than 12 inches DBH generally would be sold as sawtimber.

A higher density of tree stems and canopy cover would be retained in the cooler, moister microsites, such as along the prominent drainage (outside of the riparian buffer) near the center of Section 25. Defect trees, snags, and downed logs would be retained for wildlife to the extent feasible. In particular, snags greater than 24 inches DBH provide hiding, denning, nesting, and food storage sites for a variety of wildlife. These large snags would be retained, unless to do so would create an unusually unsafe concentration of fuels.

2.1.2 Treatment Methods

The different treatment methods are outlined below. The majority of the work would be done by a hand crew (i.e., BLM fuels crew, inmates, Hotshots, contractors, etc.) under the supervision of BLM's fuel/fire management specialists. Any combination of the following treatments could be implemented for the proposed project.

- *Brush Chipper with Pile Burning.* The crew would feed cut vegetation into a rubber-tracked brush chipper staged on existing roads. The crew would pile and prep vegetation in six-foot by six-foot piles for burning at a later date in accordance with a BLM-approved burn plan and other BLM policy. Approximately 60 piles per acre would be constructed.

- *Mechanical Masticator.* A mechanical masticator would be used to grind, chip, and chew vegetation. The masticated vegetation would be broadcasted across the project area, leaving an altered fuel type, which does not reduce the quantity of fuels, but rearranges them so they are more manageable in the event of wildfire suppression. Equipment selected to carry out this task would be designed to minimize ground disturbance. Multiple cutting attachments would be used to adapt to the terrain and fuels.

- *Biomass.* Biomass size material may be harvested and transported to the biomass plant (Buena Vista Biomass Power Facility) near Ione. Fallers would use chainsaws to cut brush and trees less than 8 inches DBH (unless the trees are a potential ladder fuel that threatens the larger "leave" pines). Cut vegetation would be bucked into manageable lengths for the crew to feed into a rubber-tracked chipper. The chips would be fed directly into a trailer towed by a small rubber-tracked vehicle. The vehicle would tow the chips to designated staging areas (existing roads, pullouts, and landings). The chips would then be loaded into a semi-truck trailer and transported to the biomass plant.

- *Biomass Using Feller Buncher.* Another method for harvesting biomass involves a feller buncher, a tractor with an attachment that can rapidly cut and gather several trees. The feller buncher would cut and position trees and other vegetation into piles at the harvest site. A rubber-tracked skidder would then move the vegetation from the harvest sites to designated staging areas (existing roads, pullouts, and landings). Here, a large-scale tub grinder would chip the vegetation directly into the trailer of a semi-truck for transport to the biomass plant near Ione. Trees of larger diameter, which could be utilized as sawtimber, would be loaded on log trucks to be hauled to the closest mill. It would be necessary to create tracks into the project area to access harvest sites and to transport vegetation from the harvest sites to the designated staging areas for further processing and loading. Ground disturbance would occur in areas where tracks would be needed to drive heavy equipment into the harvest areas to transport vegetation to designated staging areas. Ground disturbance would be kept to a minimum and would occur only where necessary. No new roads would be built. The number of new tracks into the project area would be minimized. The tracks would be put to bed after work at the harvest site is completed. Only existing roads, pullouts, and landings would be used as designated staging areas.

- *Dozer and Brush Rake.* BLM would demonstrate, for the public, the use of a dozer and brush rake to pile vegetation for chipping and biomass utilization in a five-acre area of project site.

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

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 _____ 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?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

a, c.) **Less Than Significant**. The proposed project is near the boundary of the Stanislaus National Forest. There are numerous residences on private land in the general area, including along the boundaries of BLM-administered land within the project area. The level of recreational use in the project area is considered to be low, although off-highway use has occurred throughout the project area. The North Fork of the Mokelumne River is located approximately one mile to the west of the project area. BLM has recommended that the river, from Tiger Creek Reservoir to State Route (SR) 49 be incorporated into the National Wild and Scenic River System.

BLM manages this area in accordance with Class III Visual Resource Management (VRM) standards. BLM's objective for Class III is to partially retain the existing character of the landscape. Management activities are designed to not dominate the view of the casual observer.

The proposed project is visible primarily from Lily Gap Road and is not known for its visual resources. Dead and decadent stands of manzanita and other brush would be removed. All oaks would be retained regardless of canopy position unless they constitute a potential ladder fuel. Other tree species such as madrone and dogwood would be left to create diversity. Although some conifers less than eight inches DBH would be removed, a full range of conifer size and age classes will be maintained as part of the treatment.

There would be no impacts to scenery from Lily Gap 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 proposed project design criteria outlined by the BLM, the proposed project would have a less than significant impact on the Stanislaus National Forest, surrounding roadways and private properties. Proposed project impacts are considered less than significant. No mitigation is required.

b.) **Less Than Significant.** The proposed project is not within a viewshed of a state scenic highway. SR-4 is an officially designated scenic highway from east of Arnold to the Calaveras County line, approximately 14.5 miles south of the proposed project at its closest point. SR-88 is an officially designated state scenic highway within Amador and Alpine counties from Dew Drop Ranger Station to the California/Nevada state line. This officially designated section of SR-88 is

approximately 7.25 miles north of the proposed project at its closest point.[2] Neither state designated scenic highway has direct views of the proposed project due to the "walls" of trees and the surrounding topography. As part of the proposed project activities, buffer areas would be set up around rock outcroppings and cultural resource sites. 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 flagged and 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 of glare into the region. Therefore, no impact would occur. No mitigation is required.

[2] California Department of Transportation. California Scenic Highway Mapping System: Calaveras and Amador Counties, State Route (SR) 88 and SR-4 Designations. [online]: http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm. Accessed on June 10, 2014.

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

a-e.) **No Impact**. The proposed project is located on land that is under the jurisdiction and administration of BLM. The proposed project site does not contain Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or active agricultural operations. The proposed 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
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

a, b, d, e) **Less Than Significant.** The proposed project is located within the Mountain Counties Air Basin within the jurisdiction of the Calaveras County Air Pollution Control District (APCD). Table 4-1 identifies general sensitive receptor areas within 10 miles of the project area. These areas could be affected by smoke from pile burns 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 Lilly Gap Project, Phase 2

Sensitive Receptor Type	Location
Towns, Communities	Volcano, Barton, Pioneer, Pine Acres, West Point, Wilseyville, Porter, Railroad Flat, Glencoe, Sandy Gulch, Bummerville
Recreation Areas	Wilson lake, Tiger Creek Reservoir, Mokelumne River, Stanislaus National Forest, BLM lands
Roads	State Route 26, Lily Gap Road, Winton Road, Hidden Valley Road, Skull Flat Road, and other BLM, Forest Service, and County Roads.
Other	Private lands adjacent to the project area

Source: BLM, *Lilly Gap Biomass Demonstration Project (CA-180-10-25) Decision Record.* April 2011.
Towns, Communities, Recreation Areas, and Roads verified using Google Earth on June 10, 2014.

Prescribed burns (pile burns) would occur as part of the proposed project. The BLM would prepare a burn plan, to be approved by Calaveras County APCD for the pile burn activities. In addition, the BLM would obtain a burn permit from the Calaveras County APCD. Burns must be conducted on authorized burn days only in consultation with the BLM, Calaveras County APCD, and the California Air Resources Board (CARB). Since smoke is made up of inhalable particulates (smoke particles that measure less than ten microns in size [PM_{10}], and of less than 2.5 microns in size [$PM_{2.5}$]) and ozone are public health hazards; pile burns would be planned during periods of unstable air, which would allow for proper ventilation.

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 burned 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.

The use of the existing unpaved roads could potentially generate dust; however, BLM has coordinated with Calaveras County APCD and dust generated by the proposed project is considered to be small and not enough to exceed Calaveras County APCD thresholds. Impacts are considered less than significant and no mitigation measures are required.

Mechanical equipment would be used for vegetation removal, thinning, chipping, and piling activities. The proposed project would include equipment such as rubber tracked chippers and skidders, semi-truck trailers, log trucks, dozers and brush rakes, and tub grinders. Exhaust hydrocarbons (EH) and pollutant levels produced from proposed project activities are considered to be small and much lower than historical levels of logging and similar activities for the Stanislaus National Forest and surrounding area. In addition, the proposed project would follow BLM equipment operating standards and would comply with requirements from the Calaveras County APCD per their standards, as well as the burn permit required for the proposed project. Therefore, exhaust from proposed project activity equipment would have a less than significant impact on air quality. No mitigation measures are required.

c.) **Less Than Significant.** The combination of the proposed project with past, present and reasonably foreseeable projects such as fuel load reductions, mastication and chipping, pile burning, 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 Calaveras County APCD rules and guidelines. In addition, all prescribed fire activities are coordinated with Calaveras County APCD 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?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

a.) **Less Than Significant.** The BLM wildlife biologist analyzed the impacts of the proposed project on wildlife, including special status wildlife in accordance with the Endangered Species Act, other authorities, and BLM policies. BLM concluded that the proposed project would not impact threatened or endangered wildlife or other BLM special status wildlife. Specific project design features are provided in Appendix B, and include the following stipulations related to wildlife: 1) implement the proposed project outside the breeding season, generally spring (March-June so as not to disrupt nests, dens, and young animals; 2) avoidance of wood rat nests and large woody debris when creating burn piles; 3) 0.25 acres uncut for every 10 acres harvested with patches totaling 5 percent of the area; 4) retain live trees within existing cavities; 5) avoid damaging existing downed woody debris, particularly large (more than 18 inches) hollow or rotten logs and rotten stumps during all harvesting operations; 6) existing coarse woody material (more than 6 inches in diameter at the large end) and snags should be retained in place; and 7) retain and scatter tops and limbs from 20 percent of the trees harvested. In addition, proposed project activities near riparian areas would maintain 100 foot buffer from the centerline of the east-west drainage of Section 25. With the proposed project design criteria (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**. There are small seasonal streams in the project area that feed into the North fork of the Mokelumne River, approximately one mile to the west. The proposed project could cause erosion and some additional sediment to flow into these streams and into the river. Proposed project activities, including the design criteria provided in Appendix B, would occur adjacent to stream drainages. Vegetation treatments would include biomass thinning and tractor and grapple piling. Sedimentation could be slightly increased in some subdrainages in the short term; however, the proposed project specific design criteria (refer to Appendix B) would be followed to minimize impacts.

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 generate noise during treatment activities. However, snags and woody debris, riparian buffers, and maintenance of canopy closures, as outlined in the proposed project description and the design criteria (refer to Appendix B), 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 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?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

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. A cultural resource study, including a background records search and field inventory, was conducted by the BLM to determine whether significant cultural resources could be affected by the proposed project. The backgrounds record search and field inventory concluded that the project area has a very low sensitivity for prehistoric resources, especially village sites. The project area's terrain is mostly steep and heavily forested and has a much higher sensitivity for historic-era gold-mining- and logging-related resources.

The proposed project site has a high sensitivity for historic-era gold-mining and logging related resources. Although no cultural resources have been identified within the project area, in the event that a previously unknown potential resource is discovered, then a flagged buffer area around the resource would be established by qualified cultural resource specialist in order to avoid the identified resource(s). Only hand treatments near the boundaries of the flagged area would be allowed.

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, flagging tape buffers would be established around identified cultural resources in order to protect by avoidance. 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 Bureau of Land Management, Mother Lode Office.

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 University of California, Museum of Paleontology located at the University of California, Berkeley, 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 Bureau of Land Management, Mother Lode Office.

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 Bureau of Land Management, Mother Lode Office 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 Bureau of Land Management, Mother Lode Office as verification that the provisions for managing unanticipated discoveries have been met.

CULT-4 Prior to any ground disturbing activities, such as the creation of tracks to drive heavy equipment into harvested areas, all crew members shall attend a tailgate session conducted by a qualified cultural resource specialist. The tailgate session shall provide information, including pictures, on the types of historic-era resources that are known to occur in the area. This information session shall provide pictures of representative resource examples, as well as providing instructions on appropriate actions, should a resource be discovered. All crew members shall sign in at the session and a roster and summary of the session shall be provided to the Sierra Nevada Conservancy and the Bureau of Land Management, Mother Lode Office as verification that the tailgate sessions was conducted.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

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 project area would not be exposed to potential seismic activity or landslides beyond the existing threat. No impacts would occur. No mitigation measures are required.

b-c.) **Less Than Significant.** The proposed project has been developed to minimize ground disturbance; however, new tracks may be created to access harvested areas. Thus, there is potential for soil erosion and/or loss of topsoil. Mechanical equipment would not operate on slopes greater than 30 percent and/or within 100 feet of perennial streams. Any new tracks would be placed in areas to minimize ground disturbance to the extent feasible. Equipment used for the proposed project would be small in size and power and would be equipped with rubber-tracked tires to minimize ground disturbance. In addition, the design of the proposed project includes maintaining woody debris and a percentage of groundcover. Therefore, impacts are considered less than significant. No mitigation is required.

In addition, given that the proposed project would provide for a healthier forest and includes erosion controls for slopes greater than 35 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
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

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. Pile burning would occur as part of the proposed project and would be relatively small burns (six-foot by six-foot areas). The BLM would prepare a burn plan, to be approved by Calaveras County APCD for the pile burn activities. In addition, the BLM would obtain a burn permit from the Calaveras County APCD. Burns must be conducted on authorized burn days only in consultation with the BLM, Calaveras County APCD, and the California Air Resources Board (CARB). Since smoke is made up of inhalable particulates (smoke particles that measure less than ten microns in size [PM_{10}], and of less than 2.5 microns in size [$PM_{2.5}$]) and ozone are public health hazards; pile burns would be planned during periods of unstable air, which would allow for proper ventilation.

Completed fuel treatments are known to sustain a forest's ability to continue to sequester carbon. Less tree carbon loss following wildfire should be viewed in the context of the carbon sequestered from biomass and saw timber removal in treated areas before they encountered fire. The ultimate use of that removed biomass results in relatively long-term sequestration in building materials, and biomass burning for energy which supplants fossil fuels.

The proposed project would use mechanized equipment such as masticators or mechanical harvesters (i.e., rubber-tracked shippers and skidders), dozers, trucks, and pile burns. Changes in combustion efficiency change the amount of CO_2 release per ton of fuel. The proposed project would improve forest health and reduce fuel load, which would reduce the risk of wildfire, thus reducing the release of additional CO_2 as a result of severe wildfire. While the proposed project would increase CO_2 emissions in the near-term due to pile burns and equipment operation, emissions overall would small and equipment would be operated using current standards. Ultimately CO_2 emissions 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?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

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. 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 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 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 Interface area. In general, wildfire ignitions are a mix of human caused and lightning. Wildfires usually spread in a continuous flaming front throwing embers ahead, starting 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.

The Wildland Urban Interface is always given priority to suppression activities. For fire suppression efforts, the effect of reducing hazard fuels in the Wildland Urban Interface 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.

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. 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
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre- existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

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 is sediment within runoff. However, the proposed project would include a 100-foot-wide streamside buffer to avoid potential runoff generated by these areas that can cause accelerated erosion on soils downslope. To prevent potential water quality degradation, streamside buffers (100-foot minimum measured from the centerline of the stream) would be established for the seasonal stream that flows through the project area. Only hand treatments would be allowed near the boundaries of the 100-foot streamside buffer. No equipment operation would be allowed on slopes greater than 35 percent, although work with hand equipment would be allowed. 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 B would ensure a less than significant impact during project implementation. While the seasonal stream, as well as water bodies downstream of the proposed project, 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 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. Ground disturbing activities would result from the proposed project, however, design criteria (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?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

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 health, thus the proposed project would not conflict with any conservation plans for the BLM or Calaveras County. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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. There are several active mining claims in the project area, the use of which is regulated by the BLM under federal mining regulations 43 CFR 3809 and 3715. One claimant has been authorized, under these regulations, to live on an existing mining claim within the project area. The BLM will continue to work with this claimant to ensure the existing mining activity and related occupancy is not negatively impacted by the proposed project. Therefore the proposed project would not result in the loss of available known mineral resources or mineral resource recovery sites. 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?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

a, b, d.) **Less Than Significant.** The proposed project would increase noise levels temporarily during activities such as mechanical thinning and tractor piling. However, the design criteria for the proposed project, as outlined in Appendix B, 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. 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 would occur in this regard. No mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

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 or land use designations 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. 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
XIV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire Protection?	☐	☐	☐	☒
Police Protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

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 BLM would provide appropriate staff for this proposed project activity. Thus, the proposed project would not result in an increase need for fire protection. The proposed 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
XV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

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 project area or adjacent 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?	☐	☐	☐	☒
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

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 moved to the project area, out of the project area, or transporting biomass from the project area to the biomass plant near Ione (Buena Vista Biomass Power Facility). 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 200 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 area 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?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

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
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?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

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 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 Calaveras County APCD rules and guidelines. 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. 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

Comments on the proposed project are obtained through the public participation process including the public review period. All comments on the Draft IS/MND must be submitted to SNC by August 7, 2014. All comments received during the 30-day public review period will be summarized and responded to in this section for the Mitigated Negative Declaration.

6.0 DISTRIBUTION LIST

- San Andreas Central Library
  1299 Gold Hunter Road
  San Andreas, CA 95249

- West Point Branch Library
  291 Main Street
  West Point, CA 95255

- Calaveras County Water District
  120 Toma Court
  San Andreas, CA 95249

- BLM – Mother Lode Field Office
  Bill Haigh – Manager
  5152 Hillsdale Circle
  El Dorado Hills, CA 95762

- Calaveras Board of Supervisors
  Madaline Krska, County Clerk Recorder
  891 Mountain Ranch Road
  San Andreas, CA 95249

- California State Clearinghouse (Hand Deliver)
  1400 Tenth Street
  Sacramento, CA 95814

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Appendix A

Silvicultural Prescription for Sierran Mixed-Conifer/Lower Montane Forest

Source: BLM, *Lilly Gap Biomass Demonstration Project (CA-180-10-25) Decision Record and Finding of No Significant Impact*, April 2011

Appendix A

Silvicultural Prescription for Sierran Mixed-Confier/Lower Montane Forest

A.1 Background and the Importance of Fire

Our definition of healthy forest conditions within the project area draws heavily from the research of North et al. (2009) in the western Sierra Nevada. Their recent report titled *An ecosystem management strategy for Sierran mixed-conifer forests* (North et al. 2009) contains key concepts and silvicutlural principles that we feel can be incorporated into the proposed action to achieve the goal of creating a healthy forest conditions within the project area.

Chief among these concepts is the importance of wildfire. North et al (2009) explains that:

> Fire plays a pivotal role in reshaping and maintaining mixed-conifer ecosystems. Fire was once very common in most of the western Sierra and has been a primary force shaping the structure, composition, and function of mixed-conifer forests. ... [Most of the fires were of low intensity and returned at frequent intervals.] The main effect of low-intensity fire is its reduction of natural and human-created (i.e., resulting from management activities) fuels, litter, shrub cover, and small trees. These reductions open growing space, provide a flush of soil nutrients, and increase the diversity of plants and invertebrates. By reducing canopy cover, fire also increases habitat and microclimate heterogeneity at site, stand, and landscape levels [North et al. 2009:5-6].
>
> Forest fuels are usually assessed in three general categories: surface, ladder, and canopy bulk density. Fuel treatments often focus on ladder fuels (generally defined to be variably sized understory trees that provide vertical continuity of fuels from the forest floor to the crowns of overstory trees.) Some studies and models, however, suggest a crown fire entering a stand is rarely sustained (i.e., sustained only under extreme weather conditions) if understory fuels are too sparse to generate sufficient radiant and convective heat. [North et al. 2009:3].
>
> By itself, prescribed fire is difficult to apply in some forests owing to fuel accumulations, changes in stand structure, and operational limitations on its use. Mechanical treatments can be effective tools to modify stand structure and influence subsequent fire severity and extent and are often a required first treatment in forests containing excessive fuel loads. [North et al. 2009:6-7]
>
> Prescribed fire is generally implemented very carefully, killing only the smaller size class trees. In some cases, it is ineffective for restoring resilience, at least in the first pass. For example, prescribed fire may not kill many of the larger ladder-fuel or co-dominant true fir trees that have grown in with fire suppression. In many stands, mechanical thinning followed by prescribed fire may be necessary to achieve forest resilience much faster than with prescribed fire alone. [North et al. 2009:7]
>
> Some forests cannot be prescription burned, at least as an initial treatment, because of air quality regulations, increasing wildland home construction, and limited budgets. Yet restoration of these forests still depends on modifying fuels because it reduces wildfire intensity when a fire does occur and can produce stand conditions that simulate **some** of fire's ecological effects. [North et al. 2009:7]

One measure of resilience is that fire disturbance produces mortality patterns consistent with the dynamics under which the forest evolved. Mixed-conifer resilience might be best ensured by (1) reducing fuels such that if the forest burned, the fire would most likely be a low severity surface and (2) producing a forest structure that keeps insect and pathogen mortality at low, chronic levels. Where intermediate-size trees are abundant, they may present a fire and fuels risk, especially when live crowns are continuous to the forest floor (North et al. 2009:v).

Intermediate-size trees can contribute to overly dense stands that are moisture stressed and at risk of bark beetle attacks:

In addition to ladder and surface fuels, managers have been concerned with reducing canopy bulk density in DFPZs and the defense zone of wildland urban interfaces (WUI). Overstory trees are commonly removed, and residual trees are evenly spaced to increase crown separation. The efficacy of canopy bulk density reduction in modifying fire behavior is largely a function of weather conditions. Research has suggested there is often limited reduction in crown fire potential through overstory thinning alone, without also treating surface fuels. [North et al. 2009:4]

A concern with the widespread use of canopy bulk density thinning in defensible fuel profile and defense zones is the ecological effects of the regular tree spacing. In the Sierra Nevada, historical data, narratives, and reconstruction studies indicate mixed conifer forests were highly clustered with groups of trees separated by sparsely treed or open gap conditions. This clustering can be important for regenerating shade-intolerant pine, increasing plant diversity and shrub cover moderating surface and canopy microclimate conditions within the tree cluster and providing a variety of microhabitat conditions for birds and small mammals. [North et al. 2009:4]

A.2 Importance of Stand Heterogeneity and Density

Recent studies have shown that spatial heterogeneity was a key feature in forest resiliency and characteristic of frequent fire's effect on mixed-conifer forests. Fuel treatments that produce uniform tree spacing reduce this ecologically important spatial heterogeneity. North et al. (2009) explains that:

Horizontal heterogeneity, however, used to be relatively common in Sierran mixed-conifer forests [due to logging/reforestation practices]. All of the Sierran reconstruction studies suggest mixed-conifer forests, under an active fire regime, had a naturally clumped distribution containing a variety of size and age classes. [North et al. 2009:15]

At the stand level, vertical heterogeneity can still be provided by separating groups of trees by their canopy strata. For example, a group of intermediate-size trees that could serve as ladder fuels might be thinned or removed if they are growing under large overstory trees. The same size trees in a discrete group, however, might be lightly thinned to accelerate residual tree growth or left alone if the group does not present a ladder fuel hazard for large, overstory trees. [North et al. 2009:15-16]

To increase horizontal heterogeneity, we suggest using microtopography as a template. Wetter areas, such as seeps, concave pockets, and cold air drainages, may have burned less frequently or at lower intensity. Limiting thinning to ladder fuels in these areas is suggested because with their potentially higher productivity and cooler microclimate, they can support greater stem densities, higher canopy cover, and reduced fire effects. A concern with current uniform fuel reduction is that these microsite habitats associated with sensitive species would be eliminated. Surface fuel loads at these microsites should still be reduced to lower their vulnerability to high-intensity fire.

In contrast, upslope areas, where soils may be shallower and drier and where fire can burn with greater intensity, historically had lower stem densities and canopy cover. On these sites, thinning might reduce the density of small or, where appropriate, intermediate trees and ladder and surface fuels toward a more open condition. In some circumstances this thinning may reduce water stress, accelerating the development of large residual trees. Within a stand, varying stem density according to potential fire intensity effects on stand structure would create horizontal heterogeneity. [North et al. 2009:16-18]

Historical forests can provide a better understanding of the ecological processes that have shaped mixed-conifer forest and the habitat conditions to which wildlife have adapted. All reconstruction studies, old forest survey data sets, and 19th-century photographs suggest that frequently burned forests had very low tree densities. ... Studies reconstructing pre-European conditions all indicate that forests had a greater percentage of pine, a clustered pattern with highly variable canopy cover, and a high percentage of the growing stock in more fire resistant, large-diameter classes. ... What these reconstructions do provide is inference about the cumulative process effects of fire, insects, pathogens, wind, and forest dynamics on stand structure and composition, producing forests resilient to most disturbances, including wildfire. ... [Modeling] found a low-density forest dominated by large pines was most resilient to wildfire, sequestered the most carbon, and had the lowest carbon dioxide (CO2) emissions and thus contributed less to global warming. An analysis of carbon emissions and storage from different fuel treatments, found

understory thinning followed by prescribed fire produced the greatest reduction in potential wildfire severity without severely reducing carbon stocks. [North et al. 2009:9].

In fire-suppressed forests, shrubs are often shaded out, reducing their size, abundance, and fruit and seed production in low-light forest understories. Anecdotal narratives, a forest reconstruction, and a few early plot maps suggest shrub cover in active-fire conditions might have been much higher than in current forests, mostly owing to large shrub patches that occupied some of the gaps between tree clusters. [North et al. 2009:12]

Studies in the Sierra Nevada and Klamath Mountains found that mixed-conifer structure and composition varied by fire patterns that were controlled by landscape physiographic features. Fire intensity, and consequently a more open forest condition, increased with higher slope positions and more southwesterly aspects. ... Cumulatively these studies suggest that forest landscapes varied depending on what structural conditions would be produced by topography's influence on fire frequency and intensity. [North et al. 2009:19]

A.3 Silvicultural Strategy

North et al. (2009) asserts that a new silviculture for Sierran mixed-conifer forest that

> balances ecological restoration and wildlife habitat with fuel reduction can meet multiple forest objectives. By necessity, recent Sierran silviculture has first been focused on reducing fire severity through fuel reduction. For many reasons, including maintaining or restoring resilient forests, public safety, and property loss, fuel reduction remains a priority. We suggest that , with some modification, wildlife and ecological objectives can also be met. [North et. al. 2009:22]

> Diameter-limit prescriptions applied equally to all species will not remedy the significant deficit of hardwoods and pines in current forests. Prescriptions that differ by species can retain hardwoods, which are important for wildlife, and favor pines that can increase the forest's fire resilience. Given their current scarcity in many locations, there are few instances that warrant cutting either hardwoods or pines in mixed-conifer forests. [Id.]

In general, leaving pine and thinning white fir, Douglas-fir, and incense-cedar will help restore historical species composition and increase the forest's fire resilience. There are times, however, where removing pine can reduce fuels, decrease the risk of drought or insect induced mortality, and accelerate the growth of the residual pine trees.

> We suggest creating landscape heterogeneity in the Sierra Nevada by mimicking the forest conditions that would be created by the fire behavior and return interval associated with differences in slope position, aspect, and slope steepness. In general, stem density and canopy cover would be highest in drainages and riparian areas, and then decrease over the midslope and become lowest near and on ridgetops. Stem density and canopy cover in all three areas would be higher on northeast aspects compared to southwest. Stand density would also vary with slope becoming more open as slopes steepen. [North et al. 2009:20]

Locating gaps in areas with thinner soils or lower productivity may be logical to foster lower canopy cover since these areas historically supported lower tree densities and fuel loads. In the forest matrix between tree groups and gaps, frequent-fire forests generally consisted of widely spaced, large trees, most of which were pines. The relative proportion of these conditions (i.e., low density, dispersed large trees, and large and small gaps and tree groups) and their composition could be varied depending on existing forest conditions and topographic position.

> The proposed silvicultural approach is a multiaged-stand strategy driven by the need for wildlife habitat, fire-resistant stand structures, and restoration of stand and landscape patterns similar to active-fire conditions in mixed-conifer forests. Although we use the term multiage, we are most interested in size and structure, and their associated ecological attributes. Multiaged stands are a flexible means of including variable stand structures with two or more age classes and integrating existing stand structures into silvicultural prescriptions. [North et al. 2009:22]

> Clusters of intermediate to large trees (i.e., >20 inches diameter at breast height [DBH]) are sometimes marked for thinning with the belief that they are overstocked and thinning would reduce moisture stress. Some evidence, however, suggests these groups of large trees may not be moisture stressed by within-group competition.... Reconstructions of Sierran forests with active fire regimes have consistently found large trees in groups. These groups, however, can be at risk if intermediate and small trees grow within the large tree groups. Thinning these small and intermediate trees will reduce fire laddering. [North et al. 2009:23-24]

What is considered a ladder fuel differs from stand to stand, but typically these are trees in the 10- to 16-inch DBH classes. Trees larger than this may be thinned, for additional fuel reduction by reducing canopy bulk density in strategic locations. Removal of some of the intermediate sized trees would also have the economic benefit of providing revenue to help offset the costs of the fuels reduction and could fund additional projects (North et al. 2009:24).

> Thinned intermediate-size trees should only be fire-sensitive, shade-tolerant species such as white fir, Douglas-fir, and incense-cedar. In mixed-conifer forest, attempt to keep intermediate-size pines and hardwoods because of their relative scarcity and importance to wildlife and fire resilience. . . Some intermediate-size trees can still function as ladder fuel, particularly those that were initially grown in more open conditions. These trees can have live and dead limbs that extend down close to the forest floor providing a continuous fuel ladder. . . [In] middle to upper slope topographic position ... some thinning of intermediate-size trees may help accelerate the development of large "leave" trees. We suggest, however, that these criteria not be applied to riparian areas, moist microsites often associated with deeper soils, concave topography, or drainage bottoms because these areas may have supported higher tree densities and probably greater numbers of intermediate size trees. [North et al. 2009:24-25]

Appendix B

Design Criteria

DESIGN CRITERIA

To minimize potential adverse impacts to resources in the area from the proposed project, the United States Department of the Interior, Bureau of Land Management, Mother Lode Field Office identified the following design criteria within the NEPA Environmental Assessment/Finding of No Significant Impact prepared for the 420-acre Lilly Gap Forest Health 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 200 acres known as the Lilly Gap Forest Health Project, Phase 2; this proposed project is a part of the larger 420-acre Lilly Gap Forest Health Project. The design criteria are considered part of the proposed project activities, where applicable.

- *Minimize New Ground Disturbance*. Cut vegetation would be taken to designated staging areas: existing roads, road pullouts, and landings on BLM-administered land for further processing and loading into trucks. No new landings would be built. In some cases, it would be necessary to create tracks into the project area. The tracks are needed to drive heavy equipment to harvest sites and to, then, transport the harvested vegetation to the designated staging areas. Wherever possible, a hand crew with chainsaws and a rubber-tracked chipping and hauling equipment would be used (rather than a feller buncher) to harvest biomass and sawtimber. Biomass material may be harvested and transported to the biomass plant near Ione (Buena Vista Biomass Power Facility). Berms, large boulders, and other kinds of barriers may be placed at strategic locations after harvest to prevent dirt bikes and other off-highway vehicles from driving in the treated area and causing erosion.

- *Erosion and Sedimentation Control*. Erosion and sedimentation are potential issues affecting the drainages near where the center line (running east-west) of the Section 25, crosses the drainage that appears on the USGS 1:24,000 topographic map. This stream drainage has been degraded by previous land use. Mining and timber harvest have left an areas of un-vegetated slope and has caused some sedimentation in the channel. To prevent any further potential degradation, streamside buffers (100ft minimum from the centerline of the stream) would be established for the perennial streams that flow through the project area. No equipment operation would be allowed on slopes greater than 35 percent; hand work would be allowed.

- *Weed Control*. To minimize the potential for introduction or spread of invasive weeds, equipment used for the proposed action would be cleaned prior to entering area and, where possible, would avoid operating within weed-infested areas, such as stands of scotch broom or oblong spurge. Occurrences of these weed species were found only at the edge of the public land and avoidance should be feasible.

- *Cultural Resources*. Flagging-tape buffers would be established around identified cultural resources. These cultural resources would be protected during project implementation.

- *Wildlife*. Attempt to implement the project outside the breeding season, generally spring (March-June) so as not to disrupt nests, dens, and young animals.

- *Wildlife*. Avoid wood rat nests and large woody debris when creating burn piles. If a potential nest cannot be avoided, check the pile for signs of wildlife before lighting. If nests or dens are found, leave the pile alone. If it must be burned, restack it nearby or give the animal a path to escape from the fire.

- *Wildlife*. Leave an uncut patch (minimum of 0.25 acres) for every 10 acres harvested, with patches totaling 5 percent of the area. Use leave trees or large snags as the center for uncut patches. Riparian and other buffers can help to satisfy this goal.

- *Wildlife.* Retain live trees with existing cavities.

- *Wildlife.* Avoid damaging existing downed woody debris, especially large (18+ inches) hollow or rotten logs and rotten stumps during all harvesting operations. Leave all existing coarse woody material (more than 6 inches in diameter at the large end) and snags as possible.

- *Wildlife.* Retention of coarse woody debris in managed stands should more closely model coarse woody debris found in natural stands. Retain and scatter tops and limbs from 20 percent of the trees harvested.

- *Mining Activity.* There are several active mining claims in the project area. BLM is regulating the use of these claims under the federal mining regulations at 43 CFR 3809 and 3715. Mining claimant Louis Saltzer has been authorized by BLM under these regulations to live on one of his mining claims, now within the project area analyzed in this EA. BLM would work with Louis Saltzer to ensure that his mining activity and related occupancy, as allowed under the regulations, is not negatively affected by the proposed action.