

USFS/NFWF WILDFIRE RESTORATION GRANT PROGRAM
POWERHOUSE - PLANTATION REFORESTATION
2021 ANF PRIORITY PROJECT REQUEST

I. Project Description

- a. **Powerhouse Reforestation - Plantations**– Steven Bear
- b. The 2020 Lake Fire impacted over 31,142 acres of coastal sage scrub, montane chaparral, oak woodlands, riparian woodland areas, ponderosa pine, gray pine, bigcone Douglas-fir stands and plantations. The Lake Fire occurred within and in direct proximity to the Powerhouse Fire of 2013. The ANF estimates that approximately 10,225 acres of bigcone Douglas-fir, interior ponderosa pine, Sierra Nevada Mixed Conifer and gray pine stands, mixed conifer/oak and plantations were deforested through the actions of this wildfire. Deforestation as described by the USFS is when a tree stand loses over 50% of its basal area or trees per acre. Deforestation requires intervention by the Forest Service to re-establish the stand to the pre-existing density and species composition. Without this intervention, the tree stands are at greater risk to convert to a different vegetation community type. A recent survey and mapping project have shown that bigcone Douglas-fir mortality is increasing and its extent decreasing through drought, insects and fire.
- c. The Angeles National Forest seeks to restore conifer vegetation types altered by the Powerhouse, and subsequent Lake Fire, including bigcone Douglas-fir, gray pine, ponderosa pine and plantations within the burned areas. **This project focuses on reforestation of the plantations deforested by fire (404 acres).** (See attached map.) Reforestation of native tree stands (9,821 acres) will be addressed in a separate project. Restoration establish forest vegetation through planting, and re-planting if necessary. Treatments are from establishment up to pre-commercial thinning.
- d. This is an implementation project. Activity to include seed collection, seedling production and delivery, site preparation, planting of native conifers (bigcone Douglas-fir, gray pine, ponderosa pine, and Coulter pine), release for survival of newly planted seedlings, survival and certification exams, and reducing hazardous fuels within and around existing or newly established stands. All seedlings planted shall be Phytophthora free. The desired outcome is 75-100 trees per acre after 5 years from initiation of the forest establishment work. Invasive weeds found in project areas will be treated prior to beginning work in the units. Project activity to also include project-level monitoring to evaluate survival and recruitment over time.
- e. Project activity expected to require 3-5 years to complete.
- f. ANF will provide prescriptions describing the desired condition, with specifics for each designated treatment unit. ANF will monitor work and evaluate outcomes.
- g. Project team will need to have practical experience and expertise in reforestation and fuels work. Site preparation may involve hand tools or mechanized equipment.

Planting may involve the use of planting bars, shovels or hoedads. Release may involve the use of hand tools (hoes) or chemicals. Fuel work may be done by hand or mechanical equipment such as masticators.

- h. ANF will supply maps and GIS shapefiles to identify unit boundaries. ANF will conduct survey and flagging of cultural sites prior to work beginning. Project team activity will include surveying for sensitive plant, invasive plant, and wildlife, and will flag avoidance and treatment areas in accordance with the Decision Memos listed in footnote 1 below. Project team will need to have all requisite skills and proficiency to conduct surveys, as approved by ANF.
- i. Project team will be expected to protect sensitive resources, meet prescription and target acres, ensure activity occurs within unit boundaries, and meet relevant scheduling considerations. For example, on the ANF, planting season normally occurs from February through March, release for survival from March through April, and cone collecting from July through October.
- j. A Fire Plan will be developed in coordination and approval with ANF. Project team will adhere to all fire precautions and safety responsibilities associated with project. Weather and fire conditions may necessitate times of reduced activity or no activity. Project team are responsible for all safety equipment and fire prevention equipment used on the job. ANF will monitor work progress and fire safety. ANF will inspect equipment used in work to ensure fire plan requirements are met. A safety plan for the Project Team is strongly recommended. Project team are expected to follow all applicable health and safety protocols needed to conduct work safely and comply with all federal, state, and local jurisdiction regulations.

II. Project Requirements

- a. NEPA – NEPA has been completed for the 404 acres of plantations¹. A silvicultural prescription will be provided. DMs for this project are attached.
- b. Permits – Project team must obtain all necessary state and federal permits prior to beginning work. Any welding or cutting will need a permit from the Forest Service. A fire plan variance must be obtained prior to work performed during high fire danger days such as E PAL day. PAL is short for Project Activity Level and is measure of fire risk. The daily PAL levels are provided by the ANF Dispatch. If herbicides are used to treat weeds prior to treatment or competing vegetation as part of tree release, then Project Team will include a licensed pesticide applicator (QAL) and abide by all federal, state and local laws and regulations. Herbicide use will require submittal of a Pesticide Use Proposal form for ANF approval. Restoration related cone collection will also require ANF permits.

¹ Decision Memo: SCMRRD Plantation Maintenance Project (1/8/2010); Decision Memo: SCMRRD Sawmill-Liebre Integrated Forest Health Project (6/4/2014); Decision Memo: Powerhouse Vegetation and Fuel Treatment Project (12/16/2019).

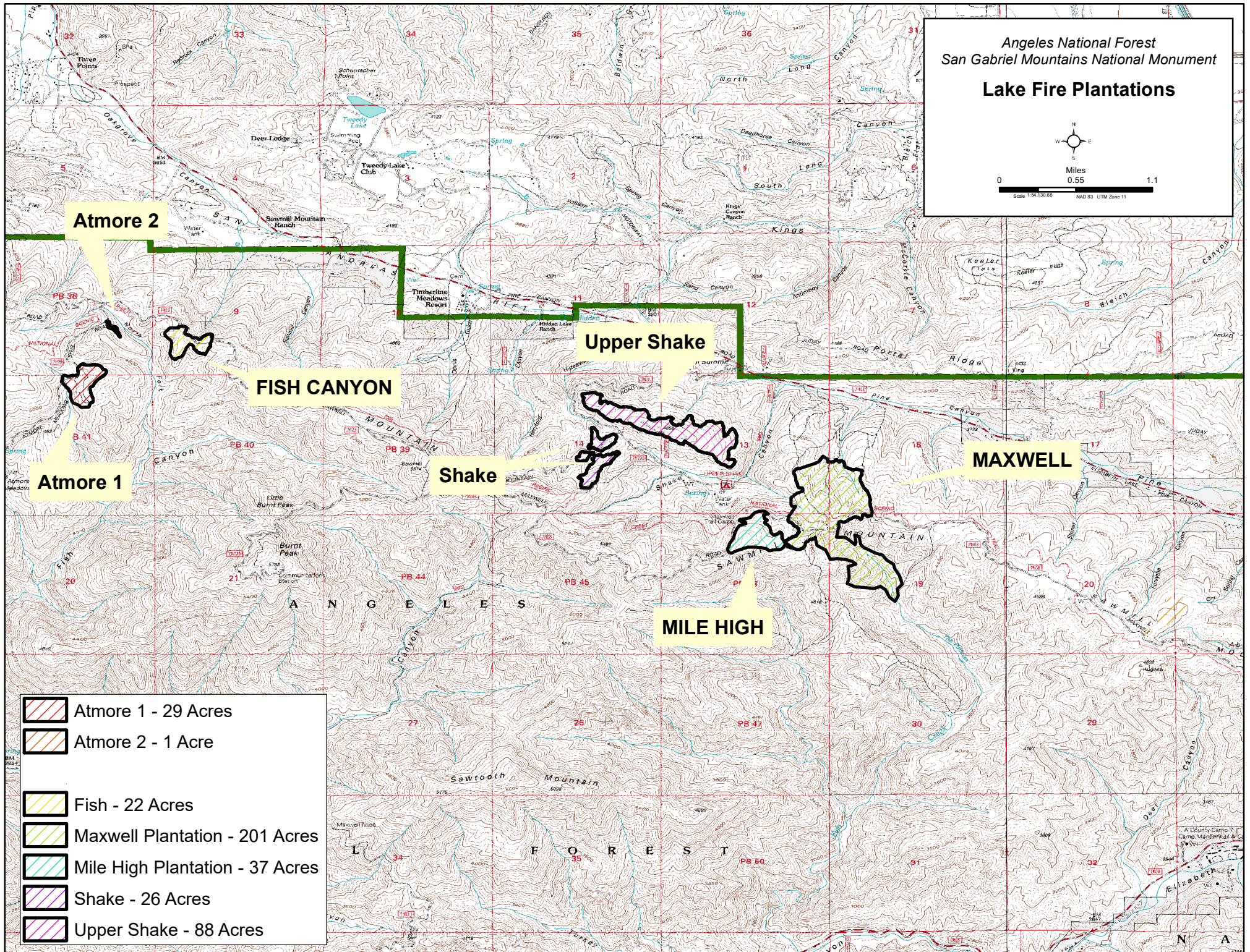
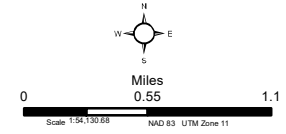
- c. Surveys – Project team will flag invasive weeds for treatment prior to initiating reforestation work (see Section I.h.).
- d. Skills – Crew foreman or project leader should be expert in reading and interpreting treatment prescriptions and delineating project boundaries using GPS; project unit boundaries will not be flagged on the ground. Project team will need all requisite experience and certifications with hand tools and mechanical equipment such as chainsaws, pole saws, chippers, masticators and other equipment that may be used. Project team will also require experience performing survival exams and certification of planting success and outcomes.
- e. Data Sets – ANF will provide GIS shape files of treatment project areas. ANF will also provide treatment prescriptions for planting and release units, as well as guidance illustrating proper techniques and specifications.








III. Safety

- a. Safety is a #1 priority for ALL employees, government, grantee, contractors or volunteers. All members of the project team will follow a develop a Job Hazard Analysis (JHA) with ANF staff and adopt a safety program to guide on-site activity.

Steven Bear
Los Angeles Gateway District
Natural Resource Specialist (Resource Officer)
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12/15/20

Angeles National Forest
 San Gabriel Mountains National Monument
Lake Fire Plantations



-  Atmore 1 - 29 Acres
-  Atmore 2 - 1 Acre
-  Fish - 22 Acres
-  Maxwell Plantation - 201 Acres
-  Mile High Plantation - 37 Acres
-  Shake - 26 Acres
-  Upper Shake - 88 Acres

DECISION MEMO

SANTA CLARA MOJAVE RIVER RANGER DISTRICT PLANTATION MAINTENANCE PROJECT

USDA FOREST SERVICE SANTA CLARA MOJAVE RIVER RANGER DISTRICT, ANGELES NATIONAL FOREST LOS ANGELES COUNTY, CALIFORNIA

BACKGROUND

The Plantation Maintenance project consists of eleven plantations primarily located along Liebre Ridge between Bald Mountain on the west and Lake Hughes/Grass Mountain on the east. Three additional plantations are located along Bouquet Canyon Road from the southern forest boundary to Bouquet Reservoir. The plantations are located in areas classified as Backcountry, Back Country, Non-motorized and Developed Area Interface by the Angeles National Forest.

The Angeles National Forest Land Management Plan identifies a need to complete 1,000 acres of mortality removal, 600 acres of thinning and 100 acres of reforestation in order to move the Angeles towards the desired condition of community protection and healthier forests. This proposed action supports this resource management program emphasis.

Lack of management activity in these plantations in the past has created a situation where trees have become overstocked, reducing their overall vigor. This circumstance places the trees at risk of mortality from insects, disease, drought and fire. By reducing canopy cover and increasing spacing between individual trees, moisture competition will be reduced and a healthier growing condition for the remaining trees will be created. By pruning lower branches, removing competing brush from within the plantations and by creating a fuelbreak around the plantations, the potential of fire induced mortality is reduced. Finally, by replanting in areas where mortality from insects, disease or fire has occurred, recreation and wildlife habitat features will be retained.

Characteristics of the project site along with proposed actions are summarized in Table 1 and the location of the project site is illustrated in the map attached.

Table 1. Characteristics of the Project Site

Plantation Name	# Acres	Treatment(s)	Legal Description
Atmore	7	TPR(H)	T7N R16W Sec 46
Boundary	1	TPR(H)(M)ip	T7N R14W Sec 26,35,36
Centennial	5	TPR(H)ip	T6N R14W Sec 34,33,28,27
Desert View 1	13	TPR(H)(M)	T7N R15W Sec 20
Desert View 2	14	TPR(H)(M)	T7N R15W Sec 20
Grass Mountain	5	TPR (H)(M)	T7N R15W Sec 27,28
Hollow Tree	9	TPR(H)ip	T7N R15W Sec 28
Sandberg	32	TPR(H)(M)	T8N R17W Sec 32
Squirrel	23	TPR(H)(M)	T7N R15W Sec 20
Steiner	15	TPR(H)(M)	T7N R15W Sec 20
Tumble Inn 1	5	TPR(H)(M)	T17N R17W Sec 7
Tumble Inn 2	15	TPR(H)(M)	T17N R17W Sec 7
Upper Shake	91	TPR(H)	T7N R16W Sec 13
Total Acres		235	

Treatments T Thin
 P Prune
 R Release (H) Hand (M) Masticate
 ip inter plant

It is my decision to proceed with the Santa Clara Mojave River Ranger District Plantation Maintenance Project. This project follows the direction of the National Fire Plan and the Healthy Forest Initiative and would not result in adverse environmental effects.

Project Description

The purpose of this project is to reduce the risk of catastrophic wildfire, improve wildlife habitat, improve health and vigor of individual trees within plantations and assure the long term retention of these features on the landscape of the forest. The proposed action is designed to improve forest health and reduce wildland fire risk. The proposed treatments are tools that will be used to achieve the desired conditions.

Mortality Removal: All dead trees within the boundary of the plantations will be removed, except those non-hazardous dead trees greater than 16 inches in diameter will be left in numbers of 2-3 per acre for wildlife habitat. Material over three inches in size will be retained on site for possible sale as a forest product (firewood). Material less than 3 inches and within 100 feet of a road will be chipped and the chipped material blown back onto the site. Material 3 inches and less and greater than 100 feet from a road will be piled for burning when conditions are favorable based on parameters of a prescribed fire plan. All stumps will be “flush cut” within 4” of the surface except where a rock or other obstacle prevents this and then a 6 inch cut above the obstacle will be permitted.

Thinning: Trees will be removed to create 20 feet x 20 feet spacing between the boles of the remaining trees. Native trees, (ponderosa pine, incense cedar and Coulter pine) will be favored over non-native species. Material over three inches in size will be retained on site for possible sale as a forest product (firewood). Material less than 3 inches and within 100 feet of a road will be chipped and the chipped material blown back onto the site. Material 3 inches and less and greater than 100 feet from a road will be piled for burning when conditions are favorable based on parameters of a prescribed fire plan. All stumps will be “flush cut” within 4” of the surface except where a rock or other obstacle prevents this and then a 6 inch cut above the obstacle will be permitted.

Fomes annosus (*Heterobasidion annosum*) is a fungus that attacks a wide range of woody plants causing a decay of the roots and butt and the death of sapwood and cambium. All conifer species in California are susceptible to the fungus. To reduce the risk of *fomes annosus* infestation, Sporangin will be applied within 15 minutes to freshly cut stumps. The active ingredient in Sporangin is borax, a naturally occurring mineral made of sodium, boron, oxygen, and water. Borax is virtually nontoxic to humans, birds, fish, and to aquatic invertebrate animals. No treatment of vegetation would occur within 200 feet of streams or during rain events; therefore, no borax is anticipated to enter the streams.

All tree-form oaks will be retained but thinned to 2-4 stems per tree.

Hand Clearing, Masticating and Release: All brush within the plantation boundary will be cut 4” or closer to the surface except where a rock or other obstacle prevents this and then a 6 inch cut above the obstacle will be permitted. Material less than 3 inches and within 100 feet of a road will be chipped and the chipped material blown back onto the site. Material 3 inches and less and greater than 100 feet from a road will be piled for burning when conditions are favorable based on parameters of a prescribed fire plan. In addition, a 30 foot wide “fuelbreak” will be created around the perimeter of the plantations, where all brush will be cut or masticated. Mastication will only occur on slopes less than 30%. Masticated material will be retained on site to provide protection for the soil and reduce the potential of the spread of noxious weeds.

All tree-form oaks within the fuelbreak areas will be retained and thinned to 2-4 stems per tree.

Pruning: All trees retained after thinning will be pruned to a height of 10 feet from the surface or no more than ½ of the live crown height, when 10 feet cannot be achieved. All limbs will be “flush cut” to the bole of the tree. Material less than 3 inches and within 100 feet of a road will be chipped and the chipped material blown back onto the site. Material 3 inches and less and greater than 100 feet from a road will be piled for burning when conditions are favorable based on parameters of a prescribed fire plan.

Planting: In plantations where mortality from insect, disease, drought or fire has created areas where reforestation is required to meet 20 foot x 20 foot spacing, planting of native stock seedlings will occur. Planting will generally occur during January through May, dependent on elevation and moisture conditions. Planting holes will be created by use of a power soil auger or with a manual planting bar. A 2 foot x 2 foot “scalp” will be created at each planting site to limit competition from herbaceous vegetation. Spacing for seedling will be approximately 6 feet x 6 feet.

Weed Treatments: Hand removal of noxious weeds including thistle, will occur throughout the plantations as needed where those species are found and with prior permission from the Forest botanist.

Table 2. Summary of Acres by Treatment

Acres by Treatment	
Treatment	Acres
Mortality Removal	43
Thinning	235
Fuelbreak Maintenance (Hand Clearing, Mastication)	42
Pruning	235
Planting	15
Brush Removal (Release)	235

Avoidance and Minimization Measures

The avoidance and minimization measures included below preventing extraordinary circumstances and those in Appendix A are incorporated into my decision, and are mandatory conditions of the authorization for this project.

REASONS FOR CATEGORICALLY EXCLUDING THE PROPOSED ACTION

The proposed action falls under the following categories of actions that may be excluded from documentation in an environmental impact statement (EIS) or environmental assessment (EA) and normally does not individually or cumulatively have a significant effect on the human environment:

Categorical Exclusion (31.12 (#3)) (FSH 1909.15): “Repair and maintenance of administrative sites” and (31.2 (#6)) (FSH 1909.15): “Timber stand and/or wildlife habitat improvement activities which do not include the use of herbicides or do not require more than one mile of low standards road construction”

The environmental analysis conducted for the proposed action determined that there were no extraordinary circumstances or conditions that would result in significant adverse effects. Extraordinary circumstances include, but are not limited to, the following:

1. Threatened and Endangered Species or Their Critical Habitat

Based upon results from the site assessment, the project site contains suitable habitat for the following wildlife species:

- California spotted owl
- California legless lizard
- San Diego Coast horned lizard
- Pallid bat
- Western red bat
- Tehachapi white eared pocket mouse

Forest Service Sensitive Species

It is my determination that the proposed project may affect individuals, but is not likely to result in a trend toward Federal listing or loss of viability for the California spotted owl, California legless lizard, San Diego horned lizard, pallid bat, western red bat and Tehachapi white-eared pocket mouse.

2. Forest Service Sensitive Species

Wildlife

Based upon results from the site assessment, the project site contains suitable habitat for the following wildlife species:

- California spotted owl
- California legless lizard
- San Diego Coast horned lizard
- Pallid bat
- Western red bat
- Tehachapi white eared pocket mouse

It is my determination that implementation of the SCMRRD Plantation Maintenance Project will not affect any threatened or endangered wildlife species or their designated critical habitat. (Angeles National Forest, June 2009)

Botanicals

- To reduce impacts to the population of slender mariposa lily (*Calochortus clavatus var. gracilis*) at Hollow Tree plantation, populations will be flagged and avoided and the following restrictions will apply:
 1. No replanting will occur within 100 feet of the slender mariposa lily population.
 2. Mortality removal may occur between September 15 thru February 29 when the slender mariposa lily is dormant. The rootballs will be left in place, and efforts will be made to minimize soil disturbance.
 3. No burn piles will be constructed within 100 feet of the slender mariposa lily population.
- To prevent impacts to the short-joint beavertail cactus (*Opuntia basilaris var. brachyclada*) at Centennial plantation, the population will be flagged and avoided with a 50 foot buffer.

It is my determination that implementation of the SCMRRD Plantation Maintenance Project will not affect any threatened or endangered botanical species or their designated critical habitat. (Angeles National Forest, December 2009)

3. Flood Plains, Wetlands, or Municipal Watersheds

The project would not adversely affect floodplains, wetlands, or municipal watersheds.

4. Congressionally Designated Areas, Such as Wilderness, Wilderness Study Areas, or National Recreation Areas

There are no congressionally designated areas within the project area (U.S. Department of Agriculture, 2005).

5. Inventoried Roadless Areas

The project area is not located within an inventoried roadless area (Angeles National Forest, 2000).

6. Research Natural Areas

There are no research natural areas within the project area (U.S. Department of Agriculture, 2005).

7. American Indians and Alaska Native Religious or Cultural sites

Regularly scheduled meetings and correspondence with the Native Americans on general Forest issues and mutual concerns have not identified any American Indian or Alaska Native religious or cultural sites of concern located within the treatment areas.

8. Archaeological Sites or Historic Properties or Areas

Forest Service personnel conducted an Archaeological Reconnaissance and produced a report on January 15, 2009. Cultural resources were encountered during the survey. The Forest Heritage Resource Program Manager has deemed project activities as an undertaking where management measures are necessary for protection of historic properties and it is necessary to notify Project planner, manager, or implementer, to flag, avoid and buffer zone all resources to be protected (Stip. I(A)(2), and Stip. I(B)[2] of Section 106 Form). Ground disturbance, mastication, equipment staging, planting, pile burning, or chipping will not be permitted in the Heritage Resource site boundary. As directed in the 106 form by the Forest Archaeologist, mastication or other ground disturbance will not be allowed within those plantations with dense vegetation and therefore poor visibility restricting a successful survey of heritage resources. Any use of the Old Ridge Route (Forest Road 8N04) must be approved by the District Ranger on a case by case basis and coordinated closely with the Heritage Resource Officer before implementation or before any heavy equipment is transported across it. (Angeles National Forest, January 2009)

9. Clean Air Act General Conformity

The proposed action has been analyzed as required under the General Conformity Rules of the federal Clean Air Act and 40 CFR Part 51, subpart W and part 93, subpart B and has been determined to conform to the applicable State Implementation Plan for the purpose of attaining and maintaining all National Ambient Air Quality Standards (Angeles National Forest, November 2008). This project does not exceed threshold levels and therefore meets federal conformity guidelines. No additional air quality analysis is required and no conformity determination is required for this Forest Service action.

REFERENCES

- Angeles National Forest. 2000. Inventoried Roadless Areas Map. Roadless Area Conservation. September 15, 2000. Available: <http://www.roadless.fs.fed.us/states/ca/ange.pdf>.
- Angeles National Forest. 2009. Air Quality Specialist Report for SCMRRD Plantation Maintenance Project. Prepared by AMSET* Air Quality Specialist, November 2008.
- Angeles National Forest. 2009. Archaeological Reconnaissance Report (Section 106 Form) for SCMRRD Plantation Maintenance Project. Prepared by Darrel Vance, Angeles National Forest Heritage Resource Program Manager, January 2009.
- Angeles National Forest. 2009. Biological Evaluation/Biological Assessment Letter for SCMRRD Plantation Maintenance Project. Prepared by Teresa Sue, AMSET Wildlife Biologist and Pete Johnston, District Biologist, June 2009.
- Angeles National Forest. 2009. Biological Evaluation/Biological Assessment Letter for Plants for SCMRRD Plantation Maintenance Project. Prepared by Wendy Boes, AMSET Botanist and Janet Nickerman, Forest Botanist, December 2009.
- Angeles National Forest. 2009. Hydrology Report for SCMRRD Plantation Maintenance Project. Prepared by Gail Bakker, AMSET Hydrologist #399, January 2009.
- U.S. Department of Agriculture. 2005. Land Management Plan – Part 2 Angeles National Forest Strategy. Pacific Southwest Region R5-MB-076. September 2005.

*AMSET – Adaptive Management Services Enterprise Team, US Forest Service.

Appendix A

Avoidance and Minimization Measures

The following avoidance and minimization measures shall be implemented to avoid the potential for significant adverse effects to sensitive environmental resources. These measures are mandatory conditions of project authorization:

1. All materials, wastes, and equipment will be removed from the project site(s) at the completion of the project.
2. Vehicles will not be driven off of designated access roads and fuelbreaks during the course of project implementation.
3. Where feasible, safety zones and escape routes will consist of the existing roads and trails.
4. Where feasible, snags and down wood will be left in place.
5. To the extent feasible, rock outcrops should be excluded from hand treatments and mechanical equipment.
6. In order to minimize potential disturbance impacts, work crews should be trained about Angeles National Forest (ANF) special status species.
7. Work crews must immediately notify the Los Angeles River Ranger District Biologist of any sightings of threatened, endangered, proposed, candidate, and sensitive plant and animal species (TEPCS Species) and of any injured/sick/abandoned animals.
8. Where feasible, burning and removal of trees and other vegetation will be conducted outside of the general nesting season for migratory birds (approximately April 1– September 1). The Forest Biologist will be notified if treatment occurs between April 1 – September 1.
9. For treatments within 500 feet of suitable southwestern willow flycatcher habitat, noise-generating activities that require the use of large equipment or mechanized equipment such as chain saws will be scheduled to occur outside of April 1 to August 31. Beyond the 500-foot buffer, no seasonal restriction is recommended for the flycatcher. Noise-generating activities can proceed during this timeframe if surveys during the current breeding season have determined that southwestern willow flycatchers are not present in the project area.
10. If suitable nesting habitat for the California spotted owl is present in the project site or within ¼ mile of the project site, limited operating periods may apply. Limited Operating Period Guidelines from the June 2004 *Conservation Strategy for the California Spotted Owl (*Strix occidentalis occidentalis*) on the National Forests of Southern California* will be in place, unless surveys confirm that spotted owls are not nesting in the proximity of the project. If protocol surveys determine that spotted owls are nesting within 0.25 mile of the project area or if nesting owls' Protected Activity Center (PAC) is within 0.25 mile of the project area, project activities in this area may not occur from February 1 - August 15.

11. All equipment staging areas and burn pile areas will be located away from known areas with invasive species occurrences. A Forest Service botanist will identify appropriate locations prior to project implementation, and this information (map) will be provided to the contracted entity.
12. TEPCS plants observed within the project area will be flagged and treatments will be designed to minimize negative impacts.
13. Riparian Conservation Areas (RCAs) will be defined and mitigated as follows:
 - a) Perennial Stream = 300' buffer; Intermittent Stream = 100' buffer.
 - b) No mechanized equipment allowed.
 - c) No take of live riparian species, i.e. willow, maple etc.
 - d) Retain or re-establish ground cover to 60-70%, consisting of litter, duff, slash, grass.
 - e) In identified RCAs, there will be no treatment within stream inner gorge (from channel bottom to major break in slope).
 - f) Any ground-based units that have a high degree of existing soil quality impairment (as identified by hydrologist/soils specialist) will require mitigations so as not to exceed threshold standards for detrimental disturbance.
14. Any heavy equipment staging areas and access points will be rehabilitated and blocked after project completion. Rehabilitation would include returning the ground to natural contours, implementing decomposition and erosion control measures as needed, and covering bare soil with slash, chips, pine needles, or cut brush.
15. In the masticated area material will remain on site to provide a barrier to the noxious weed invasion into the treated areas.
16. Protocol standards will be used in the washing of equipment to prevent the spread of noxious weeds. Documentation forms regarding this activity will be maintained by the project manager and forwarded to the forest Botanist.
17. Prior to project implementation a Forest Service Botanist will be contacted no later than one month prior to project implementation to insure that the proper protection measures are in place. The following is a list of known high priority invasive species from the project area and control measures to prevent spread:
 - a) Arundo (*Arundo donex*): The population of arundo at the Boundary plantation will be flagged and avoided with a 50 foot buffer.
 - b) Tobacco tree (*Nicotiana glauca*): The populations of tobacco tree known from Boundary and Centennial plantations will be removed (cut to ground) prior to project implementation or flagged and avoided with a 50 foot buffer.
 - c) Periwinkle (*Vinca sp.*): The two locations of periwinkle in the Centennial plantation will be flagged and avoided with a 50 foot buffer.
 - d) Tamarisk (*Tamarix sp.*): The solitary tamarisk plant at the Sandberg plantation will be removed prior to project implementation (this occurrence is on a roadway so buffering is not possible). Complete removal of individuals includes removal of roots and vegetative parts.

- e) Tree of Heaven (*Ailanthus altissima*): The population of Tree of Heaven known from Boundary will be flagged and avoided with a 50 foot buffer.
 - f) A combination of natural barriers (rocks, logs, etc.), screening, and fencing will be used to prevent/discourage illegal vehicle activity during and after the project treatment. Fire prevention technicians and other staff would monitor the area, and if/when problem areas arise, remedial and preventative actions would be taken as appropriate. Coordination with adjacent landowners, public education, and signing will be used as appropriate if necessary.
18. Prescribed burning activities will take place using the following mitigation measures in order to minimize air quality impacts:
- a) Apply Best Available Control Measures (BACMs) described in the USEPA Staff Work Project, "Prescribed Burning Background Document and Technical Information Document for Best Available Control Measures", 1992.
 - b) Burn when piles are dry to increase combustion efficiency and therefore reduce emissions from the burn.
 - c) Mop-up rapidly, usually within 8 hours, and extinguish residual smoke following the flaming phase.

DECISION MEMO

Powerhouse Vegetation and Fuel Treatment Project

U.S. Forest Service Angeles National Forest
Los Angeles Gateway Ranger District
Los Angeles County, California
R17W T7N

BACKGROUND

The Angeles National Forest (ANF) Los Angeles Gateway Ranger District (LAGRD) proposes the Powerhouse Vegetation and Fuel Treatment Project. This project aims to use various forestry techniques to remove excessive fuel loads and improve forest health primarily on the ridgetops of the Sawmill and Liebre Mountains. There is a need to treat the vegetation and move the fuel loads back towards pre-suppression levels. This will provide opportunities for more successful suppression efforts and compliment the work of adjacent communities to be more fire resilient which I anticipate will help reduce some of the negative effects of wildfire.

The purpose of the project is to:

- 1) Maintain the Powerhouse Fuelbreak located between the Old Ridge Route and the 7N01 OHV road, situated primarily on the ridgetops of the Sawmill and Liebre Mountains; to provide safe and effective locations from which to perform fire suppression operations; to slow the spread of a wildland fire at this strategic fuel break location and to reduce the potential for the loss of life, property and natural resources.
- 2) Focus on forest health, particularly on oak mortality and spotted owl habitat protection, through prescribed burning and vegetation treatments in mixed conifer and oak stands. Prescribed burning and vegetation treatments will reduce fuels, reduce competition and promote a more resilient stand structure in native stands as well as plantations.

DECISION

I have decided to implement the proposed action, which includes maintenance of an existing fuel break and vegetation treatments to reduce woody and herbaceous vegetation and improve forest health in native stands and plantations. The vegetation treatment and fuel break activities occur within the proposed boundary on Sawmill and Liebre Ridge (Figure 1). Implementation of the proposed action will be consistent with the implementation guidelines and design features listed in Appendix A.

Woody and herbaceous vegetation treatments and forest health treatment locations are based on a range of conditions including topography, vegetation types, stand conditions and spotted owl Protected Activity Centers (PAC) proximity. This work would be done through:

- Mechanical treatments, which may include crushing or masticating of vegetation.
- Hand treatments will be used for woody and herbaceous vegetation reduction, thinning to reduce tree density, pruning and release of competing vegetation for growth. Cut

vegetation will either be chipped on site, lopped and scattered or placed in slash piles to be burned.

- Prescribed fire includes pile burning, understory burning and broadcast burning in all vegetation types and treatment areas and may require hand lines to be constructed around the identified burn areas.

Treatment of plantations is a component of the proposed action and includes specific treatments designed to enhance stand health and decrease mortality from fire and insects. These treatments include thinning to reduce tree density, pruning, release of competing vegetation for growth, treatment of activity fuels (chipping or mastication), site preparation, planting, re-planting, release for survival of planted seedlings and naturals, and constructing a 30-foot firebreak around the perimeter of each plantation treated. Plantations within the proposed action area include Maxwell – 32 acres; Mile High – 30 acres and Shake – 26 acres. No new plantations will be established.

This action is categorically excluded from documentation in an environmental impact statement (EIS) or an environmental assessment (EA). The applicable category of actions is identified in agency procedures as *Timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than 1 mile of low standard road construction* (36 CFR 220.6(e)(6)).

None of the proposed activities require road construction. Invasive weeds when encountered in treatment areas will be removed through various treatments determined to be the most practical and efficacious.

I find there are no extraordinary circumstances that warrant further analysis and documentation in an EA or EIS. I considered resource conditions identified in agency procedures that should be examined in determining whether extraordinary circumstances might exist:

- **Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species** – No potentially Threatened or Endangered plant/wildlife/fish species or designated critical habitats will be adversely affected by this proposal. The project has potential to adversely affect R5 FS Sensitive plant/wildlife species but is not likely to result in a trend toward Federal listing or loss of viability. No extraordinary circumstances exist for these resources with implementation of the design features listed in Appendix A.
- **Flood plains, wetlands, or municipal watersheds** – The project is not expected to have any measurable adverse effect on watersheds, streams, seeps and springs, water quality and soils. There are no floodplains or wetland habitats within the project area. The project is located on slopes and ridges in the upper reaches of municipal watersheds that lead to the Castaic and Pyramid water supply lakes, and this location is far from perennial water sources. Project design features identified in the *Technical Documentation in Support of Categorical Exclusions for the Sawmill-Liebre Reforestation Project and Powerhouse Vegetation and Fuel Treatment Project: Hydrological Resources* will prevent or control surface erosion and contain pollutants. These design features will protect water quality within the affected watersheds. The proposed reforestation will stabilize local soils and

improve water quality over the long-term, thereby restoring watershed health.

- **Congressionally designated areas such as wilderness, wilderness study areas, or national recreation areas** – There are no congressionally designated areas such as wilderness, wilderness study areas, or national recreation areas located within the boundaries of the proposed action.
- **Inventoried roadless areas or potential wilderness areas** – There are no inventoried roadless areas or potential wilderness areas located within the boundaries of the proposed action.
- **Research natural areas** – There are no research natural areas located within the boundaries of the proposed action.
- **American Indians and Alaska Native religious or cultural sites** – Regularly scheduled meetings and correspondence with the Native Americans on general Forest issues and mutual concerns have not identified any American Indian or Alaska Native religious or cultural sites of concern located within the project area. Tribal consultation for this project, within the Powerhouse Fire burn area, occurred during a Tribal meeting held at the ANF Supervisors Office on 6/29/2019. Consultation efforts for this project also occurred most recently during the Forest’s Tribal forum on 12/7/2019. Concerns were expressed by the Tribes; San Manuel Band of Mission Indians requested to be a consulting party, to continue discussions related to our inventory findings, how Tribal sites would be managed and protected, however, no specific substantive comments at this time were received or expressed regarding specific site(s) within the Powerhouse Vegetation and Fuel Treatment Project.
- **Archaeological sites, or historic properties or areas** – The project will apply the management standards identified in the *2018 Programmatic Agreement among the USDA Forest Service, Pacific Southwest Region, California State Historic Preservation Officer, and Advisory Council on Historic Preservation for Compliance with Section 106 of the National Historic Preservation Act of Undertakings on the National Forests for the Pacific Southwest Region (PA)* for the identification, and protection of archaeological sites, historic properties, or areas. The APE was analyzed, and areas were inventoried for historic properties using the *R5 Hazardous Fuels Protocol for Non-Intensive Inventory Strategies for Hazardous Fuels and Vegetation Reduction Projects (Appendix H)*. Non-intensive analysis and intensive inventory of the project area was completed. The current undertaking has no potential to adversely affect archaeological sites, historic properties, or areas potentially eligible for the National Register of Historic Places (NRHP), if the following management measures are followed, as referenced in *R5 PA Stipulation 7.8(b)(2)*, *Approved Standard Resource Protection Measures (2018 PA, Appendix E)*:
(1.1) Proposed undertakings shall avoid historic properties – Avoidance means that no activities associated with the undertaking that may affect historic properties shall occur within historic property boundaries; (1.3) Historic Properties within the APE shall be clearly delineated prior to the Undertaking – (1) Historic property boundaries shall be delineated with coded flagging and/or other effective marking, (2) Historic property location and boundary marking information shall be conveyed to appropriate Forest Service administrators or employees responsible for project implementation so that

pertinent information can be incorporated into planning and implementation documents, contracts, and permits (e.g., clauses or stipulations in permits or contracts as needed); (Appendix H, Post Project Procedures, Stip. 6.2) Monitoring - shall be implemented under conditions specified by the HPM within non-intensive inventory areas that may contain at-risk historic properties (i.e. areas under 30% slope, are near springs, rock outcrops, or other sensitive landforms), will be monitored by a professional archaeologist during implementation to document and ensure that project activities do not impact any unknown resources. If new resources are identified during project activities, the immediate area surrounding the resource will be flagged for avoidance. Areas that are identified as inaccessible, or where intensive inventory is not feasible due to impenetrable brush/vegetation, may be deferred and reexamined following implementation in archaeologically sensitive areas (whether mechanical treatments or prescribed fire) in accordance with procedures for impenetrable brush stipulated in PA Appendix H, 3.1(c)(2) and Stip. 4.1(b)(1) & (2).

PUBLIC INVOLVEMENT

This action was originally listed as a proposal on the Angeles National Forest Schedule of Proposed Actions since July 2019 and updated periodically during the analysis. A total of 11 emails providing information on the project and requesting scoping comments were distributed to adjacent landowners and to parties who have shown interest in past projects on the ANF. Project information was also available through the ANF's website:
<https://www.fs.usda.gov/projects/angeles/landmanagement/projects>.

The 30-day scoping period ended on August 23, 2019. During the scoping period, one phone call was received and three comment letters were submitted to the ANF.

A comment letter was submitted by the California Chaparral Institute (CCI) and expressed concerns regarding impacts to the chaparral ecosystem from the proposed vegetation and fuel reduction treatments. The ANF deciding official reached out to the CCI and had a conversation about their concerns in November 2019. The CCI was invited to visit the project area with ANF staff. The summary of response to comments is included in the appendix C of this Decision Memo (DM). A local native tribal person communicated to the ANF Heritage Program Manager via phone regarding vegetation cover and the natural cycle of plants. Two of the letters received were requests for additional project information which the ANF subsequently provided and the commenter requested to add contact emails to the mailing list.

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

Land Management Plan

This decision is consistent with the Angeles National Forest Land Management Plan. The project was designed in conformance with the land management plan's program emphasis of community protection and wildlife improvement. Project design features are consistent with management direction provided in applicable Forest Service Handbook and Forest Service Manual policies. See appendix A of the Decision Memo for detailed design features.

Clean Air Act

The Clean Air Act of 1970 and its amendments provide for the protection and enhancement of

the nation's air resources. The implementation of this Project will not exceed federal and state ambient air quality standards to protect public health. *Along with providing increased safety, prescribed burning helps reduce the chance of catastrophic wildfires which produce large quantities of smoke and can greatly reduce air quality on regional scales.* Prescribed burning will be implemented seasonally with approved burn plans *and will have small short-duration impacts.* Burn plans will be developed identifying specific tactics to reduce smoke emissions, including identifying when favorable wind directions will promote smoke dispersal prior to scheduling burn ignition. As each entry may be implemented over several seasons, smoke disturbance may impact nearby visitors by lowering visibility and from the smoke smell in the short-term. While these impacts are unavoidable, implementation guidelines in the project and burn plans will address public health and safety concerns.

The Federal Land Assistance, Management and Enhancement (FLAME) Act

The FLAME Act of 2009 and its amendments directed the Departments of Agriculture and the Interior to develop a framework called The National Cohesive Wildfire Management Strategy (Cohesive Strategy); a strategic push to work collaboratively among all stakeholders and across all landscapes, using best science, to make meaningful progress towards three goals: 1-Resilient Landscapes, 2-Fire Adapted Communities, 3-Safe and Effective Wildfire Response. The implementation of this Project aligns with the Cohesive Strategy's stated ambitions.

ADMINISTRATIVE REVIEW (APPEAL) OPPORTUNITIES

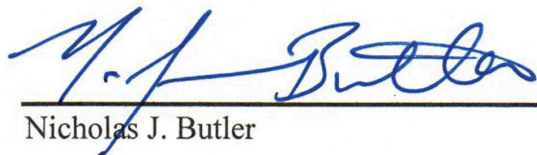
No appeal opportunity will be provided for this CE project.

IMPLEMENTATION DATE

Expected date of implementation will be upon signing of the Decision Memo (DM).

CONTACT

For additional information concerning this decision, contact: Ronald Gregor, Fuels Battalion Chief, Ronald.Gregor@usda.gov, 626-574-5394.



Nicholas J. Butler

12/16/2019

Date

District Ranger
 Los Angeles Gateway Ranger District
 Angeles National Forest

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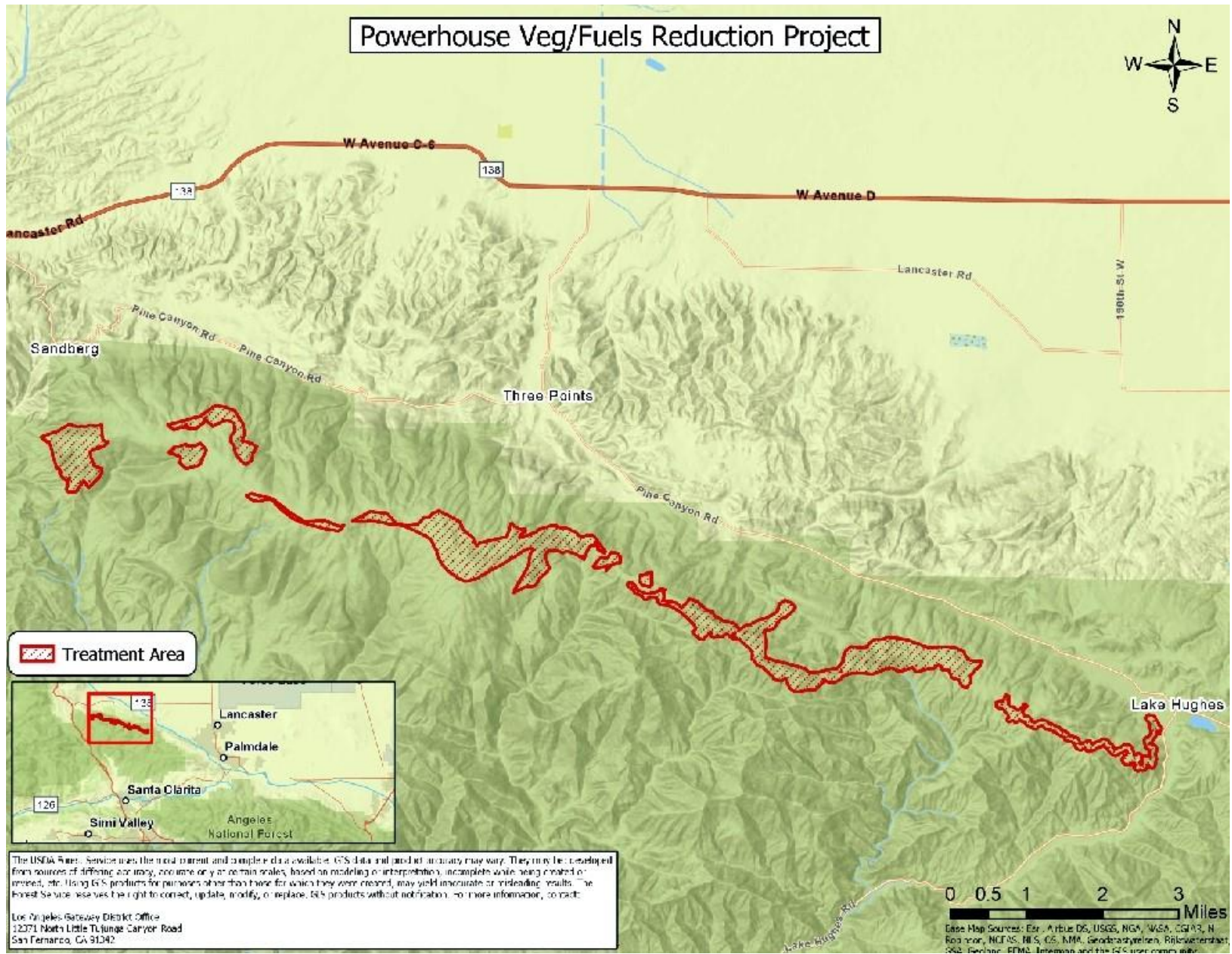


Figure 1

The USDA Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be developed from sources of differing accuracy, not more or of certain scales, based on modeling or interpretation, incomplete data, being created or revised, etc. Using GIS products for purposes other than those for which they were created, may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. For more information, contact:

Los Angeles Gateway District Office
 12371 North Little Tujunga Canyon Road
 San Fernando, CA 91342



Forest

Appendix A. Implementation Guidelines and Design Features

Implementation Guidelines

1. Oak Woodland and Oak Savanna Treatment Prescription

- A. Non-hazard trees larger than 20 inches in diameter will be left intact.
- B. Non-hazard trees being used for acorn storage or supporting bird nests and nesting cavities will be left intact.
- C. Trees will be removed if they are mistletoe infested to the point that they may be considered a hazard tree or if they are infested with secondary pests such as golden oak scale insects or bark beetles and have little to no foliage and numerous dead branches. A tree would be considered a hazard tree if the infestation is large enough that the limbs could not be removed safely individually or if the tree is dead and poses a fire hazard.
- D. Small Diameter Thinning in Oak Woodland and Oak Savanna
 - 1) Trees less than 20 inches DBH and greater than 3 foot in height will be thinned from below to achieve a residual basal area after thinning of 80-100 sq. ft. per acre (approximately 100 trees/acre). Retain a minimum of 5 oaks that are 12 inches DBH or greater per acre. Thinning will include both of the following: a 20 x 20 foot spacing between the boles of dominant and co-dominant individuals or clumps of trees.
 - 2) Oak stump sprouts will be thinned to 3-4 stems per stump or clump. Favor cutting larger diameter stems over smaller diameter stems.
 - 3) Where clumps of trees are retained, spacing between adjacent clumps shall be a minimum of 20 feet so that the crowns of adjacent clumps are separated by at least 10 feet. Retained tree clumps shall be minimum size of 1/20th of an acre (circle with a radius of 26 feet). Within clumps, bole spacing shall average 8 to 10 feet with overtopped trees to be removed from under the crown of the retained trees.
 - 4) Leave tree species preference shall be as follows: black and coast live oak, canyon live oak, interior live oak, then scrub oak. Where present, valley oak, Oregon oak and blue oak will have preference over the other species. Residual trees when available shall have crown ratios averaging 50% or greater; be in the dominant and co-dominant crown classes, have good crown and bole form, have no obvious insect, disease or mechanical injury and have high acorn production. Retained oaks shall have up to three of the largest primary stems left uncut per retained tree.
 - 5) Maximum stump height of thinned trees shall be no greater than 6 inches.
- E. Pruning in Oak Woodland and Oak Savanna
 - 1) Non-Mistletoe Pruning – For oaks not infested with mistletoe, the lower branches of trees taller than 20 feet shall be pruned at the bole or main stem to a height of 10 feet. All residual trees less than 20 feet shall be pruned to a height no greater than 40-50% of the tree height. Tree branches will be pruned to within ¼ of an inch of the bole without damaging or tearing the bark. Branches will not be flush cut to the bole. Avoid methods that would result in unnatural appearing trees or shrubs like “lollipop trees”.

- 2) Mistletoe Pruning – Treatments on oaks will include pruning of entire limbs of trees that are moderately infested and pruning mistletoe shoots from less infested trees. In each treatment leave 40-50% crown length after pruning mistletoe from oaks.
 - a. Pruning of mistletoe plant from branches – This treatment will be implemented only on branches having isolated mistletoe clumps or are lightly infested i.e. have only one to or two clumps of mistletoe. Mistletoe will be cut flush with the branch without damaging the tree.
 - b. Pruning of mistletoe infected branches – This treatment will be implemented on branches that are moderately infested i.e. contains three or more clumps of mistletoe or where mistletoe is located near the main trunk of the tree, within 18 inches of the bole. Tree branches will be removed with the standard three-point methods, back to a junction with a large branch without injuring or removing the branch collar.

F. Understory Shrub and Brush Canopy Reduction in Oak Woodland and Oak Savanna

- 1) Shrub/brush treatments will maintain free-form shapes and edges that replicate natural patterns in surrounding landscape; avoid straight lines. The live and dead brush cover shall be reduced to an average of 10-40% with a priority for the retention of live vegetation.
- 2) The 10-40% brush cover will be located randomly over the entire treatment area and can include brush islands as long as the vegetation is not clumped in one spot. Brush islands will have a minimum 25 feet diameter and will be approximately 100 feet apart.
- 3) Live and dead shrubs shall be cut and removed from the area beneath the dripline of all residual trees and tree clumps to a distance of 10 feet from the dripline. All brush cut shall be cut below the lowest live branch and have a stump height not greater than 4 inches above ground level or above obstacles.
- 4) A 30-40 feet wide buffer of standing woody and herbaceous vegetation will be left alongside roadsides to block access to illegal OHV use.
- 5) Broadcast burning in oak woodlands and oak savannas where the understory is dominated by native perennial grasses and native herbaceous vegetation will not occur until a Forest botanist has been consulted. Factors such as encroachment and invasive plant distribution will be considered when determining if broadcast burning is an appropriate treatment.

2. Mixed Conifer and Big Cone Douglas Fir Stand Treatment Prescription

- A. Non-hazard trees being used for acorn storage or supporting bird nests and nesting activities will be left intact.
- B. Small Diameter Thinning
 - 1) Trees with 20 inch DBH or less and greater than 3 feet tall will be thinned from below to a 10-20 foot spacing between crowns of dominant and co-dominant individuals or clumps of trees. Residual basal area left after thinning will be 80 sq. ft. per acre. The residual stand shall have an average spacing between crowns of individual and/or clumps of trees of 10-20 feet.
 - 2) Where clumps of trees are retained, spacing between adjacent clumps shall be a minimum of 20 feet so that the crowns of adjacent clumps are separated by at least 10 feet. Retained tree clumps shall be a maximum size of 1/20th acre. Within clumps, bole spacing shall average 8 to 10 feet, overtopped trees shall be removed from beneath dripline of retained trees.
 - 3) Leave trees shall be as follows: big cone Douglas fir, ponderosa pine, Coulter pine, grey pine, single leaf pinyon, California juniper, oaks with primary stem diameter DBH greater than 8 inches. Residual trees shall have crown ratios that average 60% or greater, be in dominant

- and co-dominant crown classes, have good crown and bole form, and have no obvious insect, disease or mechanical injury.
- 4) Retain a minimum of 5 oaks 12 inches DBH or greater per acre. Retain trees in clumps and leave those that appear to have high acorn production. Retained oaks shall have up to three largest primary stems left uncut per retained tree.
- C. Pruning
- 1) Same as non-mistletoe pruning under Oak Woodland prescription.
- D. Understory Shrub and Brush Canopy Reduction in Mixed Conifer and Big Cone Douglas Fir Stands
- 1) Shrub/brush treatments will maintain free-form shapes and edges that replicate natural patterns in surrounding landscape; avoid straight lines. The live and dead brush cover shall be reduced to an average of 10-30% with a priority for the retention of live vegetation.
 - 2) The 10-30% brush cover will be located randomly over the entire treatment area and can include brush islands if the vegetation is not clumped in one spot. Brush islands will be located in clumps of oak trees (where available) that have been treated and will have a minimum 25-foot diameter and will be approximately 100 feet apart.
 - 3) Live and dead shrubs shall be cut and removed from the area beneath the dripline of all residual trees and tree clumps to a distance of 10 feet from the dripline. All brush cut shall be cut below the lowest live branch and have a stump height not greater than 4 inches above ground level or above obstacles.
 - 4) A buffer 30-40 feet wide of standing brush or combined vegetation will be left alongside roadsides to block access to illegal OHV use.

3. Plantation Treatment Prescription

- A. Snags and Downed Wood
- 1) Retain 6 down logs per acre minimum 12 inches. Standing dead trees that are not hazardous should be left standing to provide recruitment material and to provide microsite protection.
- B. Thinning in Plantations
- 1) Trees (including natural regeneration) less than 3 feet tall shall not be thinned.
 - 2) Trees greater than 3 feet tall will be thinned to a 20 x 20 foot spacing between boles of trees within the plantation. Leave tree species preference shall be as follows: big cone Douglas fir, ponderosa pine, Coulter pine, grey pine, oaks except scrub oak with primary stem DBH greater than 8 inches, and incense cedar. Residual trees shall have crown ratios that average 50% or greater, be in the dominant and co-dominant crown classes, have good crown and bole form, and have no obvious insect, disease or mechanical injury.
 - 3) Retain a minimum of 5 oaks 12 inches DBH or greater per acre. Retained oak trees shall have up to three of the largest primary stems left uncut per retained plant.
 - 4) Maximum stump height of six inches.
 - 5) All conifer stumps will be left as horizontally flat as possible with no hinges or wood pieces to facilitate placement of the registered *Heterobasidion annosus* treatment chemical.
- C. Pruning Trees in Plantations
- 1) Same as non-mistletoe pruning under Oak Woodlands prescription.
- D. Brush Cutting under Plantation Trees
- 1) Implement the oak woodland and oak savanna brush cutting treatment except the live and dead brush cover is reduced to an average of 5% within the plantation.

- 2) Create a 30-foot fuelbreak around the perimeter of the plantation. The width of the fuelbreak will extend 30 feet outside the furthest extent of the branches of the trees (drip line) on the perimeter of the plantation.

E. Slash Treatment

- 1) All slash within the plantation (created and existing slash), including dead brush and other woody debris less than 3.0 inches in diameter or less resulting from thinning, pruning, brush clearing, and dead tree removal shall be chipped, masticated, or removed.

4. Fuelbreak/Chaparral Treatment Prescription

A. Chaparral Thinning

- 1) The live and dead brush shall be managed for an average target cover of 20-25% shrub/vegetative cover.
- 2) The 20% - 25% brush cover left standing will be native vegetation. Species preferred for retention include oak, manzanita, ceanothus, chamise and conifers, with a localized preference for those larger in diameter.
- 3) The shrub/brush cover left standing will be distributed throughout the treatment area and will include scattered vegetation islands to create a “mosaic” pattern. These islands of untreated vegetation/plant clusters should include a variety of widths and sizes (minimum 25-foot diameter) by selectively removing vegetative specimens and groupings to create a mixed vegetative area or zone to soften harsh edges.
- 4) The spacing between the vegetation islands shall be between 50 to 100 feet.
- 5) In areas where the vegetation has been cleared, straight lines and geometric shapes should be avoided to maintain a “state of naturalness” and better mimic natural patterns. These free-form shapes should reflect the natural open space patterns in the landscape and relate to the topographic form of the land to flow with the contours and follow natural lines of hills, ridges, drainages, and rock outcrops.
- 6) The area closest to the road shall be managed to avoid hard lines and should instead be “scalloped” or “feathered” to provide visual variety along the edge.
- 7) Avoid creating new access points into project area. When work is completed, install a buffer 30-40 feet wide of standing brush or combined vegetation at each access point to block access to illegal OHV use.
- 8) Cut brush below the lowest live branch, with stump height no higher than 4 inches above ground level.
- 9) Remove non-native vegetation in treatment areas, focusing on priority species identified in the weed risk assessment for the project.
- 10) Whenever feasible, implement onsite chipping and scattering of crushed or cut-piled vegetation in lieu of prescribed burning. This method provides a natural layer of mulch that serves as weed abatement and erosion control. It also reduces the visual impact of having exposed soil and/or burnt vegetation.

B. Trees within the Fuelbreak

- 1) All tree form oaks (approximately 3 inches or greater in diameter) and conifers within the fuelbreak will be retained and pruned. Where distribution allows, oak and conifer pockets \leq $\frac{1}{4}$ acre will be retained. Within these pockets, native vegetation will be retained with oaks, manzanita and ceanothus as the priority species.

C. Pruning

- 1) The lower branches of all retained trees shall be pruned at the bole or main stem within $\frac{1}{4}$ inch of the bole and to a height of 10 feet above the ground surface or to a height no greater than 30% of the live tree height. Branches will not be flush cut to the bole.
- 2) Low hanging, sweeping branches less than ten feet above ground level and connected to the primary tree bole above 10 feet shall be cut at an average of 10 feet above ground level. This is necessary on trees such as oak species with low sweeping branches.

5. Prescribed Fire

A. All Burns

- 1) Whenever feasible, implement partial consumption (50-80%) of the material generated from chipping, mastication and hand treatments. This method provides a natural layer of mulch that serves as weed abatement and erosion control. It also reduces the visual impact of having exposed soil and/or burnt vegetation.
- 2) Break up continuity of any berms created in handline construction during prescribed burns. Any remaining cut brush or other ground cover should be placed onto the line after the completion of the prescribed burn.
- 3) When possible, created control lines shall be rehabilitated after implementation to reduce the color contrast of the exposed soil and mitigate erosion. Where prescribed burning occurs, burned slash should be scattered on control lines to reduce the color contrast of the exposed soil and to prevent unauthorized use.
- 4) Rehabilitate and stabilize all created control lines that pose a risk to water quality using the following measures: break up continuity of berms, hand scallop soils at 20 foot intervals for 1 foot on slopes less than 20%, hand scallop soils at 10 foot intervals for 1 foot on slopes greater than 20% and use slash, mulch or rocks shall to cover 40-60% of bare soils when possible.
- 5) Evaluate the completed burn areas to identify areas that may need stabilization treatments or monitoring to minimize soil and site productivity loss and deterioration of water quality both on and off the site.
- 6) Burning would occur outside of established buffers for threatened, endangered and FS sensitive plant species occurrences.
- 7) No burning within 300 feet on either side of the PCT, unless necessary and under consultation of the Forest Landscape Architect.

B. Broadcast Burn

- 1) Prescribed burning should take place when conditions will facilitate a low or moderate intensity burn since this is ideal for promoting resource protection and rapid vegetation recovery.
- 2) Avoid direct ignition in or adjacent to any RCA's or perennial, ephemeral or intermittent channel.
- 3) Conduct no prescribed burning within 50 feet of any system trail, rec site, visitor center, etc., unless there is overlap between sensitive areas where a 50-foot buffer is not available. In such cases use best judgement to apply the intent of the measure, which is to make prescribed burning as inconspicuous to the public recreating within these areas. If prescribed burning is essential within 50 feet of these aforementioned areas, consultation with the Forest Landscape Architect will be necessary.
- 4) Broadcast burning in oak woodlands and oak savannahs where the understory is dominated by native perennial grasses and native herbaceous vegetation will not occur until a Forest

- botanist has been consulted. Factors such as encroachment and invasive plant distribution will be considered when determining if broadcast burning is an appropriate treatment.
- 5) When feasible, implement all prescribed burning at a low to moderate intensity to maintain integrity of resources and promote rapid recovery of vegetation. When practical, reduce residency time to mitigate the likelihood of hydrophobicity, prolonged soil damage or loss of productivity.
 - 6) Avoid use of prescribed fire on slopes with highly erodible soils and retain a minimum of 50% evenly distributed live herbaceous soil cover.

C. Pile Burning

- 1) Avoid creating piles in or within 150 feet of a waterway or drainage channel or in any of the following sensitive areas: rare plant occurrences; target invasive plant occurrences; near rock outcrops; on stumps or near existing downed logs. If pile distance cannot be avoided, consultation with the appropriate specialist shall be required prior to piling.
- 2) Piles should not exceed 15% coverage of the treatment unit (acre) when conditions permit and individual piles will not be greater than 7 feet high and 12 feet wide.
- 3) Piles should be staggered and widely spaced to prevent large areas of affected soil.
- 4) When possible, place burn piles at least 50 feet away from roads and at least 30 feet away from trees, snags and shrub patches to minimize crown and bole scorch.
- 5) Burn piles should not be placed within 50 feet of any system trail, rec site, visitor center, etc., unless there is overlap between sensitive areas where a 50-foot buffer is not available. In such cases use best judgement to apply the intent of the measure, which is to make piling and burning as inconspicuous to the public recreating within these areas
- 6) Do not burn stumps and sections of logs in piles. Material greater than 8 inches in diameter should be excluded from burn piles.
- 7) Burn piles as soon as possible after piling in order to minimize colonization by wildlife.
- 8) In order to avoid unsightly longstanding piles and in turn comply with LMP Standard S10, pile burning should occur within two years after all limbing/felling/piling/etc., is completed. This would allow at least one year for the area to recover and comply with the three-year window allowed for temporary disturbances.
- 9) Prior to burning piles, probe and disturb them with hand tools to encourage wildlife to leave. To avoid blocking the escape route for animals, set fire and place crews and probes on one side of the pile.

6. Slash Treatment

- A. All slash within the unit (created and existing slash), including logs, dead brush, and other woody debris resulting from thinning, pruning, brush clearing, and dead tree removal activity shall be treated.
- B. Remove or blow chips back into the treatment area. Do not leave chips in waterways or drainages, in and/or on TESP plant occurrences, underneath trees, against boles, or to a depth of greater than 3 inches. Whenever feasible use chips/chipped material to cover burned areas and disturbed soils.
- C. Evenly distribute excess chipped material (i.e., that exceeds the limits imposed in 6.B) or remove from the site if possible.
- D. Lop and scatter all slash and shrubs that cannot be chipped or burned.
- E. Where lop and scatter occurs, slash and material will not exceed 18 inches height off ground.
- F. No cut material shall accumulate against boles or beneath the drip line of residual trees.

- G. Slash including tree limbs, cut brush and tree boles 3 inches in diameter or smaller will be chipped where feasible.
- H. Slash greater than 3 inches diameter will be chipped, shredded, mulched, masticated, bucked, removed or placed in piles.

7. Equipment/Mastication

- A. Conduct no mastication within 100 feet of any designated trail or recreation site unless necessary and under the consultation of the Forest Landscape Architect.
- B. Do not use heavy equipment in RCA's or beyond the break of a swale, avoid deposition of mastication by-product in streams and waterways. Avoid operating or driving through any intermittent, ephemeral or perennial channel. If crossing is required, use a single location (armored if available). If an unarmored crossing is the only option, rehabilitation of the channel and banks shall occur.
- C. Drive equipment along the slope contour and avoid vertical ascending or descending or turning at the mid-point of swale.
- D. Do not operate equipment on wet soils. If equipment use results in rutting of 4 inches or greater, work shall be postponed until soil moisture decreases or appropriate measures have been established to accommodate equipment use.
- E. Do not operate equipment on slopes greater than 30%.
- F. Mastication shall not expose more than 50% of soils and will retain vegetation islands with a minimum diameter of 25 feet with a mottled appearance and staggered formation without hard vegetation lines. Island distance shall be approximately 100 feet apart and scattered throughout the treatment area.
- G. Mastication of material shall be a mottled mosaic with meandering feathered edges.
- H. Equipment shall be selected based on the direction provided in the Mastication Guidelines for Fuel Reduction/ Equipment Management for the Angeles National Forest document prepared for this project. If the appropriate equipment cannot be secured through contract further consultation with IDT member may be required.
- I. Equipment operator shall leave a stob height of 3-6 inches.
- J. Avoid creating too many new access points and when work is complete install a buffer 30-40 feet wide of standing brush or combined vegetation at each access point to block access to illegal OHV use.
- K. Locate crew and equipment staging areas away from riparian areas and known occurrences of invasive species and rare plants.
- L. Mechanical equipment is not allowed to be driven on the PCT. Avoid use of mechanical equipment within 300 feet on either side of the PCT. All permitted fuel/veg treatment work within the 600-foot buffer should be hand treatments, unless deemed necessary via consultation of the Forest Landscape Architect.
- M. Standing vegetation that is excluded from removal, should be left intact and undamaged to the extent possible.

8. Snags and Downed Logs in All Treatment Areas

- A. All snags greater than 16 inches DBH will be retained unless they meet either the Forest Service Region 5 guidelines for hazard tree characteristics (Angwin et al., 2012) and present a safety risk or they occur within 100 feet of roads (paved or not), 200 feet of structures or facilities or 300 feet on either side of the PCT.

- B. Snags less than 16 inches DBH can be removed, but should be considered for retention if any of the following conditions apply: it is a wildlife tree that serves as acorn storage or has cavities or nests, it is located in a spotted owl PAC, it is located in a designated RCA, it is located in the drainage/waterway of watersheds listed as impaired or functioning at risk. Consult with the hydrologist or designated specialist prior to removal of snags with these conditions.
- C. Retain a minimum of 2-3 hard snags per treated acre (minimum 16 inches in DBH and at least 40 feet tall) where feasible, except where safety is a concern.
- D. Where available and within the capability of the site, retain a minimum of six downed logs per treated acre (minimum 12 inches diameter and 20 feet long). Within 20 feet of roads additional downed logs shall be left in numbers to restrict illegal off-roading.
- E. If trees are cut/felled and meant to be left in place, leave the tree log intact (no bucking). Buck felled trees down to manageable sections only if tree components can be removed from site (e.g., chipped, sold as fuelwood, deck sale, etc.). Remove or relocate bucked tree sections to a distance of 50 feet or greater from the NFS trails, or recreation sites where feasible.
- F. Any hazard trees that must be cut within 300 feet on either side of the PCT should be left intact and safely in place without blocking the Trail or other paths of travel. Limb only if necessary.

9. Prevention of *Heterobasidion annosus*

- A. Cut stumps no greater than 6 inches from the ground. Cut conifer stumps horizontally flat without hinges to facilitate placement of a FS approved borax-based fungicide such as Cellu-Treat for the prevention of *Heterobasidion annosus*.
- B. Cellu-Treat or other FS approved borax compound must be applied on all cut live and recently dead conifer stumps within 4 hours of cutting. Plan cutting activities to avoid Cellu-Treat applications when there is precipitation. Comply with label regulations and all state and federal pesticide regulations.

10. Re-entry

- A. Re-entry should not occur in areas with forest health and fuels reduction treatments any sooner than every 5 years to allow for vegetation recovery.
- B. Re-entry should not occur in areas with unstable or sensitive soils any sooner than 10 years to allow top soil development and/or without consultation from a physical scientist.
- C. Prior to implementation of any treatment, the site will first be assessed to determine if it already meets the desired condition. If an area meets the desired conditions prior to vegetation treatments, work does not need to be initiated and will be deferred.

Design Features

11. Invasive and Special Status Plants

- A. Before project activities begin, conduct surveys for special status and invasive plant and use these survey results to prepare an invasive species risk assessment approved by the Forest botanist.
- B. After the initial survey, conduct surveys for special status and invasive plant species during the spring season prior to each treatment. Update the invasive species risk assessment to reflect changes in species occurrence and distribution.
- C. Flag and avoid special status plants. Occurrences of threatened and endangered plant species would be flagged by Forest approved botanist and avoided through use of a buffer. The Forest

approved botanist would determine the appropriate buffer size. No project work or foot traffic would be allowed within the buffer zone.

- D. Treatments will avoid increasing the presence of non-native invasive plants or type conversion to non-native annual grasses.
- E. Implement invasive plant treatments according to the direction provided in the invasive species risk assessment and in compliance with the guidelines in the Forest-wide invasive species NEPA. Treatments will focus on high priority species including tree of heaven, blessed thistle, Russian thistle, and hedge mustard.
- F. Implement invasive plant treatments for five years following project implementation. After year five, the Forest Botanist and District Fuels Officer will assess the site to determine priority species and future actions.
- G. Locate all equipment and crew staging areas away from locations with known target invasive species occurrences.
- H. If any new infestations of invasive species are identified in the project area, it shall be promptly reported to the Forest botanist.

12. Vehicle and Equipment Washing

- A. Implement washing requirements for project tools, vehicles and equipment. Any vehicles/equipment engaged in off-road travel and all ground disturbing and vegetation removal tools and equipment (including handheld) must be cleaned prior to entering Forest Service land.
- B. Washing of tools, equipment and vehicles will be done in a manner that will effectively remove seeds and propagules and would not further enhance the spread of invasive plants through improper disposal of rinse water. Washing of equipment and vehicles must include tires/tracks, wheel wells, bumpers, fuel/skid pans and undercarriages. Personnel transport vehicles are exempt from this requirement as long as they have not engaged in off-road travel.
- C. Holder shall notify Forest Service at least 2 working days prior to bringing each piece of equipment onto National Forest Lands or moving the equipment to a new site within the project area unless otherwise agreed. Notification will include vehicle washing information. Upon request of Forest Service, arrangements will be made for Forest Service to inspect each piece of equipment prior to it being placed in service.
- D. If equipment has operated in areas the Forest Service has identified as containing invasive plant species, all equipment, and tools used at that site must also be washed AFTER work has been completed and before leaving the site to conduct additional work on National Forest Lands.
- E. Holder shall certify in writing compliance with the terms of this provision prior to each start-up of operations.

13. Wildlife

- A. Before work commences, project manager will ensure work crews are familiar with any threatened, endangered, proposed or Forest Service sensitive species (TEPS) that could be found in the area.
- B. Notify project manager and district biologist of any sightings of TEPS in the project area.
- C. Allow wildlife encountered during project implementation the opportunity to evacuate the site. If necessary, for the purpose of avoiding injury or mortality, individuals can be moved to the nearest suitable habitat.
- D. Avoid disturbance of rock outcrops.
- E. Properly secure and dispose of any trash or debris generated by the project.

- F. Do not cut or disturb any non-hazard trees supporting birds' nests or nesting cavities.
- G. Whenever practicable, implement project activities outside the bird breeding season (February 15 to September 15). If work is performed during the breeding season, provide field crews with training to assist in their detection of nesting birds. The field crew will make a reasonable effort to assess the site before and during their vegetation and fuels treatments to determine if nesting birds are present. If a songbird nest is found, leave a minimum 10 ft buffer of untreated vegetation around the shrub/tree with the nest where possible. If the songbird nest is high up in the tree (>10 ft), it is not necessary to leave a buffer. If a raptor nest is present in the treatment area, notify the Forest biologist and they will determine the appropriate buffer size.

14. California Spotted Owl

- A. Implement treatments in compliance with the June 2004 Conservation Strategy for the California Spotted Owl (*Strix occidentalis occidentalis*) on the National Forests of Southern California. Maintain a limited operating period (LOP) prohibiting activities within approximately 0.25 miles of a California spotted owl nest site, or activity center where a nest site is unknown, during the breeding season (February 1 through August 15), unless surveys confirm that the owls are not nesting (S19 and S20 LMP).
- B. Monitor spotted owl occupancy and productivity where vegetation and fuels management are taking place. Monitor as soon as projects are planned and continue for a minimum of two years after treatment.
- C. No treatments are allowed in woodland habitats within 1000 feet of the nest tree stand in PAC LA039 unless the biologist has been consulted.
- D. Within the PAC, no treatments are allowed in woodland habitats with canopy closure greater than 30%. In stands with less than 30% canopy closure, understory treatments are allowed as long as there is no reduction in the overstory canopy.
- E. Within the PAC, no reduction in overstory canopy is allowed in any woodland habitat.
- F. Within the PAC, all drainages will be excluded from treatment including a minimum distance of 200 feet from any intermittent or ephemeral channel and 300 feet from any perennial channel within the PAC.
- G. Within the PAC, retain 4 to 8 of the largest snags available per acre, or at least 20 ft² basal area per acre of snags greater than 15 inches DBH and 20 feet tall.
- H. Within the PAC, retain at least 9 down logs per acre of the largest logs available, ideally at least 12 inches in diameter and at least 20 feet long (at least 180 lineal feet of logs).
- I. Avoid disturbance or removal of woodrat nests.
- J. To enhance woodrat habitat, leave some slash piles close to the edge of treatment areas scattered near logs and stumps, especially along the steep slopes. Leave large downed logs intact.

15. Hydrology and Soils

- A. Areas of stable soils that present 50% or less of soil cover should not be treated. Soil cover can be rocks, slash or chipped materials.
- B. Retain a minimum of 50% live shrub canopy cover (shrubs, trees, forbs) in designated sensitive or unstable soil areas.
- C. Chip or lop/scatter cut vegetation and leave it in place to protect soils when and where feasible.
- D. Broadcast burning in sensitive soil areas should be kept at low intensity to minimize impacts to the area.

- E. Burn piles that are created in sensitive soil areas, should consist only of material 4" or less in diameter, and pile size should not exceed 6' x 8'.
- F. Re-entry intervals where mechanical treatment occurred shall be no less than 5 years, sensitive or unstable soils re-entry shall not occur any sooner than 10 years and/or without prior consultation with a physical scientist.
- G. Any work in sensitive soil areas will have consultation with the Hydrology Staff or physical scientist prior to any implementation.
- H. Refuel equipment and store fuel or ignition devices at least 100 feet away from surface waterbodies and wetlands.
- I. Report spills and clean up and remove spilled materials, residues, and any other hazardous materials from NFS land according to specified requirements in appropriate guiding document and applicable State and Federal laws, rules and regulations.
- J. Sensitive or unstable soils shall be defined on a map and shall have site specific design features.
- K. Heavy equipment shall not operate on wet soils. If equipment use results in rutting of 4 inches or greater, work shall be postponed until soil moisture or appropriate measures have been established to accommodate equipment use.
- L. A qualified monitor should be present for mastication and prescribed burning activities and to ensure compliance with BMPs. Minimum monitoring efforts include the following: for mastication, a qualified monitor will be present on day one, periodically during mastication and before the contractor is off site. For prescribed burning, a qualified monitor should be present periodically during hand treatments of vegetation and during both the broadcast and pile burning when available.

16. Heritage and Cultural Resources

- A. Notify the Heritage Resource Program of the intent to begin project implementation.
- B. Heritage Resource Program representatives will identify any sensitive cultural resources that exist within or immediately adjacent to the project area that require specific avoidance or protection measures, consistent with the *2018 Programmatic Agreement among the USDA Forest Service, Pacific Southwest Region, California State Historic Preservation Officer, and Advisory Council on Historic Preservation for Compliance with Section 106 of the National Historic Preservation Act of Undertakings on the National Forests for the Pacific Southwest Region (PA)*.
- C. Heritage Resource Program representatives will determine when the PA's standards cannot be met, in which case the regulations at 36 CFR 800 will be followed to manage the Forest's Section 106 compliance responsibilities or to resolve any potential effects of the project.

17. Scenic Integrity

- A. A Forest Landscape Architect must be consulted prior to, during, and throughout any work occurring within 300 feet on either side of the PCT.
- B. Mechanical equipment is not allowed to be driven on the PCT. Avoid use of mechanical equipment (except for chainsaws) within 300 feet on either side of the PCT. All permitted fuel/veg treatment work within the 600-foot buffer should be hand treatments, unless necessary and with the consultation of the Forest Landscape Architect.
- C. Prior to implementation of any treatment, the site will first be assessed to determine if it already meets the desired condition. If an area meets the desired conditions prior to vegetation treatments, work does not need to be initiated and will be deferred.

- D. Within the first 100 feet on either side of the PCT no fuel reduction treatments can occur with the exceptions otherwise noted in previous PCT protection measures in this document.
- E. Within 100-200 feet on either side of the PCT, no more than 25% of the existing brush cover may be removed, but it must be done in a manner that appears natural and even throughout.
- F. Within 200-300 feet on either side of the PCT, no more than 50% of the existing brush cover may be removed, but it must be done in a manner that appears natural and even throughout.

18. Unauthorized OHV Use

- A. Restore areas of unauthorized OHV use to a natural condition. Use techniques such as vertical mulching with local dead vegetation to visually disguise unauthorized OHV trails. Areas impacted by unauthorized OHV use will be restored to a natural condition using treatments such as invasive plant removal and seeding with native, locally collected seeds.
- B. A combination of natural barriers (rocks, logs, etc.), screening, and fencing will be used to prevent/discourage illegal vehicle activity during and after the project treatment. Barriers will be used to prevent unauthorized OHV use at locations identified as existing or potential points of entry. Fire Prevention Technicians and other staff would monitor the area, and if/when problem areas arise, remedial and preventative actions would be taken as appropriate. Coordination with adjacent landowners, public education, and signing would be used as appropriate.
- C. Unless necessary, avoid creating any new access points. Any access points created will be restored and blocked to avoid their unauthorized use by OHVs.

Appendix B. Angeles National Forest Land Management Plan (ANF LMP)

Part 3 of the LMP (Design Criteria for the Southern California National Forest) includes Plan Standards Required by (36 CFR 219). Standard #7 provides a definition for Wildland/Urban Interface (WUI)

1. **WUI - Defense Zone**
2. **WUI - Threat Zone**

Wildland/Urban Interface (WUI) as described in the **Healthy Forests Restoration Act of 2003 (HFRA)**.

WUI (as defined by the Act) is a variable width up to 1.5 miles from communities at risk or as defined in individual community fire protection plans.

This forest plan further identifies a direct protection buffer (WUI Defense Zone) and an indirect protection buffer (WUI Threat Zone) that fall within the broader definition WUI.

A **WUI Defense Zone** is the area directly adjoining structures and evacuation routes that is converted to a less-flammable state to increase defensible space and firefighter safety.

The **WUI Threat Zone** is an additional strip of vegetation modified to reduce flame heights and radiant heat. The Threat Zone generally extends approximately 1.25 miles out from the Defense Zone boundary. Yet, actual extents of Threat Zones are based on fire history, local fuel conditions, weather, topography, existing and proposed fuel treatments, and natural barriers to fire and community protection plans, and therefore could extend well beyond the 1.25 mile.

The two zones together are designed to make most structures more defensible. Following are the minimum and maximum widths for the WUI Defense Zone by general vegetation type:

WUI Defense Zone Widths Vegetation	Min Width (ft) WUI Defense Zone	Max Width (ft) WUI Defense Zone
Grass	50	100
Chaparral	100	300
Forests	300	1,500

Volume 1 of the FEIS for the LMP includes an analysis of the environmental consequences of the proposed action on vegetation, including the WUI. The following information comes from this analysis.

LMP FEIS p307

Wildland/Urban Interface

Because of the urbanization in and adjacent to the national forests in southern California, most of these national forests are viewed as part of the Wildland/Urban Interface (WUI) environment, and fires continue to be aggressively suppressed. Wildland/Urban Interface is defined as the area where dense development meets the wildlands. In the land use zoning concept related to the alternatives, these areas are identified as Developed Area Interface (DAI), defined as a mixture of developed and undeveloped lands. For general discussion these areas are referred to in this section as the interface/intermix. The interface/intermix areas are a source of substantial human-caused fire occurrence.

LMP FEIS p315

Fuelbreak construction and maintenance (table 534: Average Annual Hazardous Fuels Program) usually would occur outside the Defense zones, in both the WUI Threat zone and in the WUI environment (a distance of up to 7.5 miles from developments, or the distance that fires may burn in a 24-hour period during normal summer conditions). We estimate that herbicides would be applied to 600 acres/year on the four southern California national forests in the initial phase of fuelbreak construction. Fuelbreak maintenance, however, would depend heavily on the use of prescribed fire rather than herbicides (see Appendix O for the details of pesticide use).

LMP Part 2, p 23-24

Fuelbreak Maintenance - Annual Need: 500 acres. Existing fuelbreaks are generally maintained using prescribed fire, masticating machines, or grazing. Most of the fuelbreaks are in high hazard chaparral areas and are designed to limit wildland fire size, as well as provide firefighter access and improved firefighter safety. A few of the fuelbreaks are in coniferous forest and serve to limit fire spread from or towards communities or timber stands in poor condition. Most of the existing fuelbreaks are on ridgetops or along roads.

Fuelbreak Construction - Annual Need: 50 acres. Most of the planned fuelbreaks are also along roads and ridgetops and are proposed for limiting wildland fire patch size. While most fuelbreaks are constructed with machinery, some are built by hand or by using prescribed fire. Herbicides may be used to kill resprouting chaparral and then fire is used to maintain the fuelbreak over time. Fuelbreaks are sometimes constructed near communities to provide some level of future protection in cases where land ownership patterns or topography limit the applicability of the Wildland/Urban Interface Defense and Threat Zones concept.

Wildland/Urban Interface (WUI) Defense and Threat Zones- Annual Need: 1,500 acres. A WUI Defense Zone is a relatively narrow area in width (see standards S7 and S8 in Part 3), directly adjoining structures, that is converted to a less-flammable state to increase defensible space and firefighter safety. The WUI Threat Zone (see standard S7) is an additional strip of vegetation modified to reduce flame heights and radiant heat. The two zones together are designed to make most structures defensible. These zones are applicable to national forest land and all structures upon them. In addition, they apply where national forest boundaries are directly adjacent to communities on private lands.

Techniques may include hand or machine removal of vegetation and herbicides in the WUI Defense Zone. Treatments in the threat zone are less intensive and can generally be maintained with prescribed fire over the long-term. In forested areas, extensive tree thinning is planned as part of installing WUI Threat Zones.

- Rx Fire - Annual Need: 5,000 acres. Projects in this category are generally large burns in chaparral to reduce fire hazard near communities, or as part of an overall landscape mosaic designed to limit wildland fire patch size. Prescribed fire is also used to help restore and maintain land in the coniferous forest areas, currently categorized as Condition Class one or two. Some prescribed burns are conducted to enhance wildlife browse conditions.

Appendix C. Consideration of Comments to the Powerhouse Veg/Fuels Project

The California Chaparral Institute commented on the Powerhouse Veg/Fuels Project on August 23, 2019. Below is the documentation of the consideration of the comments:

Comment about the agency needs to document this project under an EA.

The CE category used for this project is: *Timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than 1 mile of low standard road construction (36 CFR 220.6(e) (6)).*

This project is documented under the Categorical Exclusion (CE) because it fits within an existing category for this type of activity and the effects analysis did not identify any extraordinary circumstance. An EA is the appropriate tool for projects where there is no appropriate CE category and/or there are extraordinary circumstances.

The Powerhouse vegetation and fuels project is designed to improve fire suppression efforts and to promote resiliency in woodland habitats within the Project area. Woodland habitats include montane conifer, big cone Douglas fir and oak woodlands and savannahs. Reducing competition and ladder fuels in these woodland habitats may contribute to tree vigor and reduce the potential for fire to result in tree mortality. Treatments in the chaparral vegetation will potentially slow the rate at which the fire spreads and will also create opportunities for implementation of on the ground fire suppression efforts.

Spotted owls and spotted owl Protected Activity Centers (PACs) occur within and adjacent to the project area and are associated with woodlands where there is high canopy closure and larger diameter trees. Although treatments will not occur in woodland habitats within the spotted owl PACs, they will occur in adjacent stands and in chaparral vegetation. Treatments outside the PAC may provide protection if they reduce the risk for a stand replacing event within the PAC. Chaparral treatments can slow the spread of fire and provide opportunities for firefighters to implement measures that may reduce the potential for fire to enter the PAC.

The Conservation Strategy for the California Spotted Owl (*Strix occidentalis occidentalis*) on the National Forests of Southern California (June 2004) provides guidelines for managing owls and activities within or adjacent to PACs. The fuel management guidelines from the 2004 Conservation Strategy have been incorporated into the project proposal to ensure that adverse impacts to owls and their habitat will be avoided.

Comment pointed to the remoteness of the project location.

The communities of Three Points and Lake Hughes, along with individual houses located along the Pine Canyon Road (north of the project area) are less than five miles away from the project boundary. Considering this proximity and the ability of fire to travel quickly, we do not consider this project area to be remote. The strategic location of this historic fuelbreak provides a safe area for fire crews to fight wildfires and protect nearby communities. It has been used during multiple fires for dozer line placement and ground crew attack.

A fuels report was prepared for this project and is available upon request. The fuels report includes an analysis of the vegetation, the topography and the fire history for the area. It concludes that maintenance of this fuelbreak will benefit fire suppression efforts for ignitions that occur on either side of the ridgeline. The placement of the fuelbreak next to the road enhances its effectiveness.

Commenter also questions the effectiveness of the fuelbreaks and cites scientific literature.

The FLAME Act of 2009 directs the Department of Agriculture and the Interior to make meaningful progress towards three goals: 1-Resilient Landscapes, 2-Fire Adapted Communities, 3-Safe and Effective Wildfire Response. The implementation of this project directly affects Resilient Landscapes and Safe and Effective Wildfire Response. I acknowledge many studies have shown that fuelbreaks alone do not stop wildfires. Fuelbreaks are not “fire” breaks and are not intended to stop fire. However, they are one of the many approaches that assist fire crews in fighting wildfires. My intent for the Powerhouse Vegetation and Fuel Treatment Project is to maintain a fuelbreak in a strategic location and reduce hazardous fuel loads in the project areas.

The primary value of a fuelbreak lies in the opportunity it provides fire staff for the placement of valuable resources (fire fighters, heavy equipment) when needed under the suppression mode. Firefighter safety is the top priority in wildland fire suppression and fuelbreaks can provide safe and effective locations from which to perform fire suppression operations.

Commenter points out under windy conditions, fuelbreaks won’t work.

Under extreme conditions such as a Santa Ana wind event, most firefighting tactics would be ineffective. I acknowledge that while fuelbreaks are generally ineffective during conditions such as a Santa Ana wind event, strategic fuelbreaks are integral in controlling and managing fires outside of extreme wind driven events. Fuel treatments on the ANF are done to reduce the effects of a 90th percentile fire.

There are various factors that contribute to the effectiveness of a fuelbreak including intersection and level of maintenance. Maintaining fuelbreaks keeps them available for use in ground suppression efforts. While not all fuelbreaks will be effective in all fire situations, they can be an important component of fire suppression and firefighter safety.

Comments about vegetation type conversion on the landscape.

The Liebre-Sawmill Place has unique, extensive patches of black oak savannahs, ceanothus and manzanita chaparral, and mixed conifer stands containing gray, ponderosa, big-cone Doug fir, and Coulter pines. The Powerhouse Vegetation and Fuel Treatment Project focuses on reducing hazardous fuels to meet desired conditions and maintain a strategic fuelbreak as described in the treatment prescription for the Liebre-Sawmill Place. The Powerhouse Implementation Guidelines and Design Features will maintain a mosaic or mottled vegetative cover pattern in the landscape to keep some heterogeneous vegetative structure. Vegetative “islands” as described in the Powerhouse Implementation Guidelines and Design Features, would be “feathered” to provide natural-looking transitions between trees, shrubs, and herbaceous vegetation, and maintain natural spaces between shrub groups that currently exist in the project area.

Vegetation reduction methods such as masticators, hand tools, and other mechanized equipment may contribute to the introduction and spread of invasive weeds in the project area. This issue was analyzed in the Sawmill-Liebre Reforestation Project and Powerhouse Vegetation and Fuel Treatment Project combined BA/BE and Invasive Weed Risk Assessment (2019). Invasive weeds persist in the project areas from previous projects and historical land use and can thrive in various places because of their ability to inundate native seed banks and reproduce and germinate rapidly. They outcompete native plants and can pose greater problems by adding to the fuel load and creating additional hazardous fuels in the landscape. In the Invasive Weed Risk Assessment, we provide recommendations for treating and controlling invasive weed infestations in the project areas by using hand tools, herbicide and other methods. This is an integral

part of fuelbreak maintenance, because project activities and treatment areas can be managed to lower the risk of introduction and spread of invasive plants. The Invasive Weed Risk Assessment will be updated as new or spreading invasive weed infestations are discovered.

The commenter articulates the importance of the defensible spaces and the agency’s ultimate failures of fuel treatments alone to protect vulnerable homes communities from extreme wildfires.

In 2015, the Angeles National Forest completed forest-wide NEPA to allow for implementation of defensible space treatments on National Forest Lands for the purpose of protecting adjacent private properties. Additionally, the Forest is currently working on forest-wide NEPA for implementation of defense zones to protect high value structures on the Forest. Pro-active strategies are needed to make structures and communities more resilient in the event of a wildfire and the Forest is supporting that effort. At the same time, fuelbreaks provide an opportunity for suppression efforts to occur at strategic locations as a compliment to the defense zone and defensible space treatments. If successful, the planned treatments will contribute to a more resilient landscape and reduce wildfire impacts to both chaparral and forested habitats

Because we know that fuel treatments alone cannot mitigate the potential for wildfire impacts, the Angeles National Forest works collaboratively with local communities, homeowners, state and county agencies to develop comprehensive strategies that will provide for public safety and better protection of structures. However, the Angeles National Forest does not have jurisdiction over local, state or private land. The comprehensive approach described in the comment letter is outside of our jurisdiction and therefore, outside the scope of this project.

Decision Memo
SCMRRD Sawmill Liebre Integrated Forest Health Project
USDA Forest Service
Santa Clara Mojave Rivers Ranger District
Los Angeles County, California

Background

There are two parts to the Sawmill Liebre Integrated Forest Health Project. One consists of mistletoe removal and vegetation restoration in black oak woodlands. The second part is a plantation maintenance project consisting of tree thinning, chaparral removal and tree planting. The project area is located along Sawmill Liebre Ridge which is primarily a west to east running ridgeline. The descriptions of Places are found in Part 2 (Pages 67-74) of the Angeles National Forest Land Management Plan of 2005. The management emphasis for both Places focuses on protection of communities from the threat of fire, management of recreation uses and maintenance of urban and forest facilities, while maintaining protection for biological and heritage resources.

Different treatments proposed within the project boundaries include mistletoe removal, dead tree removal and 168 acres of plantation work such as non-native plant removal and native tree planting.

The Santa Clara Mojave Rivers Ranger District of the Angeles National Forest proposes to improve wildlife habitat, improve health and vigor of individual trees and assure the long term retention of these features on the landscape of the forest. The work will be completed by a combination of contractors and Forest Service staff such as fire crews and volunteers.

Decision

It is my decision to move forward with this project as proposed with the listed avoidance and minimization measures in Appendix A. The approved proposed activities associated with this project are summarized in the following table and in the project specifications and specific activities sections of this decision memo.

Table 1. Treatment Acres of Project by Place.

	<u>Urban Interface</u>	<u>Back Country</u>	<u>Back Country, Non-Motorized</u>	<u>Back Country, Motorized Use Restricted</u>	<u>Total</u>
Total black oak stand acres	773	14	0	0	787
Total plantation acres (By plantation)					
<i>Three Points</i>	28	0	0	0	28
<i>Ray's Ridgeline</i>	8	0	0	0	8
<i>Lake Hughes</i>	15.5	6.5	0	0	22
<i>Castaic</i>	18	0	0	18	36
<i>Sand Shed</i>	5	0	0	0	5
<i>Reservoir</i>	0	5	0	0	5
<i>New Liebre</i>	0	64	0	0	64
Total pine plantation acres:	74.5	75.5	0	18	168

Proposed Action

Activities within the plantations will consist of mortality removal, thinning to create an average spacing of 20' by 20' in the plantations, tree pruning, tree planting, masticating, shrub crushing, and prescribed fire through pile burning and or pile treatment.

Proposed activities within the black oak woodland will include true mistletoe (*Phoradendron villosum*) removal, tree mortality treatment and removal, tree pruning and limb removal of infected limbs.

No new roads will be constructed as a result of this proposed action. The total assessment area for both projects consists of 955 acres. Acres by treatment are displayed in Table 1.

A silvicultural prescription will be written by a district silviculturist in training for the natural black oak/mixed conifer stand(s). The prescription will meet objectives set forth in the project specifications and in the proposed actions listed below but may include more detailed prescriptions for trees by species, diameter size, and/or by level of forest health and/or vigor.

Specific Activities for the Black Oak/Mixed Conifer Stand:

Mortality Removal

All dead trees within the boundary of the plantations will be removed, except non-hazardous dead trees greater than 16 in DBH will be left in numbers of 2-3 per acre. The rate of mortality for existing trees is estimated to be 5% in healthier stands with 60 to 90% mortality in burned stands or those with heavy insect infestations.

Thinning

Trees will be removed to create approximately 20' x 20' spacing on average between the boles of the remaining trees. Native trees will be favored as residuals over non-native species. Trees greater than 20" DBH will be left as leave trees. *Fomes annosus* (*Heterobasidion annosum*) is a fungus that attacks a wide range of woody plants causing a decay of the roots and butt and the death of sapwood and cambium. All conifer species in California are susceptible to the fungus. To reduce the risk of *Fomes annosus* infestation, Sporax will be applied to freshly cut stumps no later than 15 minutes after the tree is cut. For all cutting treatments, all stumps will be "flush cut" within 4" of the surface except where a rock or other obstacle prevents this and then a 6" cut above the obstacle will be permitted.

Pruning

All trees retained after thinning will be pruned to a height of 10' from the surface or no more than 1/3 of the live crown height for non-native trees and no more than 20% for native oaks such as black oaks, when 10' cannot be achieved. All limbs will be "flush cut" to the bole of the tree. Pruning will be done using three-point cut methods of practice in order to inhibit rapid wound healing and prohibit the probability of fungi entry into the wound. Final cuts should be perpendicular to the branch axis at the branch collar and additional residual bark wounds should be prevented.

Planting

Planting of native stock seedlings with seed from the same seed zone will occur in plantations where mortality due to insect, disease, drought or fire has created areas where reforestation is required in order to meet 20' x 20' spacing objectives. Seedlings will be planted from February through May for spring plantings, dependent on elevation and precipitation levels or soil moisture content and possible fall plantings may occur if weather is feasible. Planting holes will be created by use of a power soil auger or with a manual planting bar. A 2' x 2' "scalp" will be created at each planting site to limit competition from herbaceous vegetation. Spacing for seedling will be approximately 6' x 6'. The planting percentage at each site will depend on tree mortality. Sites with higher mortality will have a higher planting percentage but the goal is to have a 20' by 20' spacing.

Hand Clearing, Masticating, and Release

All chaparral within the plantation boundary will be cut 4" or closer to the ground surface except where a rock or other obstacle prevents this, otherwise a 6" cut above the obstacle will be permitted. Between 55 to 75% of the standing brush will be treated within the units. A buffer of standing vegetation will be maintained along the road system in order to deter unauthorized off-highway vehicle access. A mosaic of 25% to 45% of the residual untreated brush pockets at least ¼ acre in size will be retained. Where feasible, manzanita and ceanothus species will be favored in the retained pockets. A buffer 5' to 10' wide will remain in a mosaic form along the roadside to block access to illegal OHV use and to enhance the visual aesthetics along the roadside.

Mastication: Mastication will only occur on slopes less than 30% and will only be used to eradicate brush species. Tree species on site including oaks and conifers will not be masticated. Masticated material will be retained on site to add soil stability and reduce the potential for the spread of noxious weeds. Where mastication is not preferred for the primary treatment, it will still be proposed as a follow up treatment to piles in subsequent years. In order to allow time for additional ground surveys to be conducted, and aid in removal of fuels when short burning windows inhibit pile burning for several years. If mastication is not allowed due to steep slopes, lop and scatter methods will be accepted over piling in order to prevent bark beetle infestation of the piles or temporary wildlife dens from becoming established during burning windows.

The forest owned ASV skidsteer with masticating head or other similar contracted equipment will be used in these units. The brush will be masticated to a depth not to exceed six inches in these units. The masticated material will remain on site to provide a barrier to the noxious weed invasion into the treated areas. A maximum of 80% of the standing brush will be treated in the units. The presence of slopes in excess of 35% and rocks may decrease the overall treatment percentage below 80% within any single unit. All tree-form oaks within the units will be retained. Untreated pockets at least ¼ acre in size will be retained in the masticated units. Where feasible sage, manzanita, and ceanothus species will be retained in the untreated pockets.

Prescribed Fire: Ground based ignition techniques will be used to remove 70 to 90 percent of the crushed brush within treated areas. A combination of live and dead fuel moistures, temperature, wind and humidity will be used to prescribe a low to moderate intensity fire. Fire lines may be constructed as part of this treatment to provide control points and/or to allow access for firefighters. Fire lines will be no wider than 4 feet and may be constructed down to mineral soil.

All seasons will be considered appropriate for burning, unless mitigation actions are required after analysis to limit the seasonality of the burn. Burning will only occur with authorization from the South Coast Air Quality Management District.

Specific Activities for Plantation Management:

- Thin plantations to silvicultural prescription standards.
- Remove and reduce brush in plantations.
- Prune lower branches of trees to 50% of the crown stem ratio or up to 10 feet above the ground, whichever is less.
- Remove standing dead and dying trees and ladder fuels within the plantation.
- Treat freshly cut conifer stumps with Sporax to prevent the spread of *Heterobasidion annosum*.
- Construct a 30 foot wide fuel break around each plantation.

Thinning the trees to an approximate spacing of 20 feet by 20 feet (as called for in the silvicultural prescription) will lower mortality by decreasing competition for water, sunlight and space between the trees. Selection of the trees to remain will be based on tree health, species and spatial distribution within the plantations. Large trees are given preference to remain as residuals. The residual species composition will follow preference in this order with native species preference over non-native species: Sugar, ponderosa, Jeffery, and Coulter pines preferred for retention in order of highest to lowest preference. Incense Cedar and Big Cone Douglass-Fir are other species preferred for retention over Coulter pine. The thinning activities will also favor retaining Black and White oaks for each plantation in tree form to no more than four stems per tree. The purpose of this thinning is to decrease competition for water between trees and therefore increase resistance to bark beetle infestations as a result of the pine trees' ability to produce sap with stronger terpenes. The increase in distance between trees will lower the risk of crown fire by making it more difficult for crown fires to sustain themselves by moving from tree to tree. This action will also increase growth of the trees by lessening the inter tree competition for water, sunlight and space to grow.

Brush will be removed or reduced within the plantations to a height of 6 inches and a fuel break will be constructed around the perimeter of each plantation. The width of the fuel break will extend 30 feet outside the furthest extent of the tree branches (dripline) along the perimeter of the plantation. Brush will be removed to a stump height of 6 inches and at least 10 ft outside of each individual tree's dripline within the plantation. These actions decrease water stress to the plantation trees by removing the second source of water competition. These actions also increase fire resistance by breaking up volatile continuous fuels currently within the plantations.

The remaining trees' branches will be pruned to a height of 10 feet above the ground or to 50% of the height of the tree (stem to crown ratio) whichever is less. This will limit ladder fuels while allowing small trees to continue to grow.

Standing dead and dying trees will be removed. This action combined with the pruning will eliminate ladder fuels within the plantations and decrease the probability of crown fires

throughout the plantations. These actions will help create healthy environments within the plantations and can prevent new bark beetle infestations.

Biomass and Forest Product Disposal

Where possible, material will be masticated on site to a 2-6 inch depth of shredded material. When chipping is used for material reduction, a similar depth of 2-6 inches of chipped material will be allowed.

If the material cannot be chipped or masticated then it will be piled for burning. All burn piles will be constructed by hand for disposal at a later date pending an approved burn plan. Pile size will not exceed 8 ft in diameter and no higher than 8 ft. The piles will be placed no closer than 10 feet from any tree bole and outside of the tree dripline even if that distance is greater than 10 feet.

Stems and branches of sufficient size for disposal as fuel wood will be bucked to local commercial standards and may be offered for sale as fuel wood.

All woody biomass generated will be treated as follows:

- Material that is 6 Inches in diameter and greater will be cut in sections of 4, 6 or 8 feet so that it can be offered for sale.
- All cut brush and trees 3 to 6 inches in diameter will be lopped into 5 foot lengths or smaller and scattered so that it will dry and not become a haven for bark beetles.
- Trees and brush less than 3 inches in diameter will be chipped, masticated or piled for burning at a later date.
- Pile sizes are limited to 10 foot diameter and 10 foot height and will be constructed outside of the dripline of any leave tree bole.

Equipment to be Used

Where feasible, use mechanical means of brush reduction (mastication), or similar technology for brush reduction and removal.

Hand operated equipment such as: chainsaws, shears, pruning saws chippers, hand axes or shovels will be used where mechanical means area not allowed and in conjunction with mechanical equipment as needed to complete the projects.

Pile and Understory Burning

Understory and pile burning is planned. All understory burning or pile burning will be done after the site preparation, thinning, and pruning is completed. All burning will be done using an approved burn plan.

Avoidance and Minimization Measures

In addition to approving the project, a decision has been made to implement the avoidance and minimization measures, included in Appendix A to ensure the least impacts possible from this project. These measures are recommendations from specialists based on field surveys and effects analysis and are incorporated into my decision. They are mandatory conditions of the authorization for this project and can be further referenced in the MIS report and BE/BA correlated with this decision memo.

Also as part of this project, any illegal OHV trails created as a result of vegetation reduction will be rehabilitated (rehabbed). The unauthorized user trails will be rehabbed using many if not all of the following: cover trails with cut shrub vegetation, cover with down logs, cover with large rocks and boulders or other natural or artificial barriers, invasive species removal and seeding with appropriate native, locally collected seed. If illegal OHV is not a problem then this activity will not take place.

Reasons For Categorically Excluding the Proposed Action

This action falls under the following category of actions that may be categorically excluded from documentation in an environmental impact statement (EIS) or an environmental assessment (EA) and normally does not individually or cumulatively have a significant effect on the human environment.

Categorical Exclusion 31.2(6), FSH1909.15: “Timber Stand and or wildlife improvement activities, which do not include the use of herbicides or do not require more than one mile of low standard road construction.”

The environmental analysis conducted for the proposed actions determined that no extraordinary circumstances or conditions exist which would result in additional impacts. Extraordinary circumstances include, but are not limited to the following:

1. Threatened and Endangered Species or their Critical Habitat

A Biological Evaluation and Assessment was completed in June 2011 and revised and updated in May 2014 utilizing existing TEP species lists for the analysis of potential impacts to plant and wildlife species. Plant and wildlife species selected for analysis in the BEBA include the following:

TEP Species

- California condor (*Gymnogyps californianus*)

The project has been designed so that activities will not affect any threatened, endangered, proposed, or candidate plant or wildlife species. It has also been determined that no designated or proposed critical habitat for any listed species will be affected.

2. Forest Service Sensitive Species

A Biological Evaluation and Assessment was completed in June 2011 and revised and updated in May 2014 utilizing existing Forest Service sensitive species lists for the analysis of potential impacts to plant and wildlife species. Plant and wildlife species selected for analysis in the BEBA include the following:

FS Sensitive Plants

- Forest camp sandwort (*Arenaria macrandenia* var. *kuschei*)
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*)
- Ross' pitcher sage (*Lepechinia rossii*)
- Short-joint beavertail (*Opuntia basilaris* var. *brachyclada*)
- Parish's checkerbloom (*Sidalcea hickmanii* ssp. *Parishii*)

FS Sensitive Wildlife

- California spotted owl (*Strix occidentalis occidentalis*)
- California legless lizard (*Anniella pulchra*)
- San Bernardino ringneck snake (*Diadophis punctatus modestus*)
- San Bernardino mountain kingsnake (*Lampropeltis zonata pulchra*)
- Pallid bat (*Antrozous pallidus*)
- Fringed myotis (*Myotis thysanodes*)

It has been determined that project activities may affect individuals, but are unlikely to result in a trend toward Federal listing or loss of viability for any Forest Service sensitive species.

3. Flood Plains, Wetlands, or Municipal Watersheds

There are no flood plains or wetlands involved in this project, and the project will have a beneficial effect on municipal watersheds by reducing wildfire risk, and preventing associated resource damage.

4. Congressionally Designated Areas, Such as Wilderness, Wilderness Study Areas or National Recreation Areas

There are no congressionally designated areas, such as wilderness, wilderness study area, or national recreation areas involved in this project.

5. Inventoried Roadless Areas

The project does not involve any Inventoried Roadless Areas. Any portions of the project initially proposed for treatment in the proposed action that were within the nearby Fish Canyon Inventoried Roadless Area (~12 acres) were removed from the project as a result of internal scoping.

6. Research Natural Areas

The project does not involve any research natural areas. The project area does include a portion of the Liebre Mountain Special Interest Area (SIA) which is noteworthy for its diversity of oak-dominated vegetation and the occurrence of the California spotted owl, a Region 5 sensitive species. The approved proposed actions and associated minimization measures under this decision will support the preservation of these unique landscape features.

7. American Indian and Alaska Native Religious or Cultural Sites

Public scoping for this project included tribal consultation and the involvement of two forest archaeologists. There are no known American Indian religious or cultural sites within the area of potential effects.

8. Archaeological Sites or Historic properties or Areas

An archaeological survey and Section 106 Programmatic Agreement consultation has been completed, with several updates occurring between the initial proposed action and the decision. It has been determined that under the measures listed in the Section 106 documentation that no archaeological sites or historic Properties would be affected. The documentation for these findings is also a part of the project file.

9. Management Indicator Species

A Biological Evaluation / Biological Assessment (BE/BA) have been completed and is included in the project file. Due to the period of time between development of the proposed action and the signed decision, a memo to file to update the BE/BA was completed in May 2014 and is included in the project file. An analysis of the effects of management activities on management indicator species (MIS) has been completed and also makes up part of the project file.

Public Involvement

Internal scoping was conducted by the following resource specialists: Two District Biologists, Forest Botanist, 2 Forest Archaeologists, Forest NEPA Coordinator, Forest Fuels Manager and the Santa Clara Mojave Rivers Ranger District Staff. No significant issues or extraordinary circumstances precluding the action were raised. Letters requesting comments on this Decision were mailed to interested or affected parties or organizations on November 17, 2009.

Findings Required by Other Laws

This project is consistent with management direction in the Angeles National Forest Land and Resource Management Plan, 2005 as required by the National Forest Management Act, National Environmental Policy Act, Endangered Species Act, National Historic Preservation Act, Clean Water Act, Clean Air Act and all other applicable Acts. This action will not require a civil rights impact analysis because it will not have a significant impact on the social environment.

Implementation Date

Implementation of this action may occur immediately upon signing this decision memo. Implementation is planned for the next 10 to 15 years in the native black oak and mixed conifer stands and for the next 20 years in the plantations. At that time, or at any time there is a need due to a change in environmental condition from to a catastrophic event or a change in land management goals and objectives, this decision will be reviewed, updated, and or renewed.

Administrative Review or Appeal Opportunities

Since no comments expressing concerns were received during the comment period for this proposed action ending December 17, 2009, this decision is not subject to appeal, pursuant to Forest Service appeal regulations at 36 CFR 215.12(e).

Contact Person

For additional information concerning this project, contact Bob Blount District Ranger, Santa Clara Mojave Rivers Ranger District: 33708 Crown Valley Road, Acton CA 93510, or by telephone, 661-269-2808.



Bob Blount
District Ranger

Date 6/4/2014

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Appendix A
Avoidance and Minimization Measures

1. All materials, waste and equipment will be removed from the project site(s) at completion of the project.
2. Vehicles are restricted to approved access roads and fuels breaks during project implementation. Specialized project equipment such as masticators and other equipment designed to meet project objectives may work within project units with prior approval by the Forest Service. Any access barriers removed for the project will be replaced prior to project completion.
3. Where feasible, project and unit burn safety zones and escape routes will utilize existing roads and trails.
4. Where feasible, snags and downed wood will be left in place.
5. Burn plans will include monitoring plan to evaluate if further actions are need to meet recovery objectives.
6. Work crews are to be trained to recognize all Angeles National Forest (ANF) special status species, Threatened and Endangered Species, and Candidate Threatened and Endangered species (TECS). Work crews will avoid disturbing or creating impacts to these species.
7. Work crews will notify the District Biologist of any sightings of ANF Special Status Species, TECS species and any injured, sick or abandoned animals found in the project site(s).
8. When feasible burning and vegetation removal will be scheduled to occur outside of migratory bird nesting season approximately April 1 through September 1.
9. If suitable habitat for the California Spotted Owl is found within the project site of or within .25 miles of the project site, limited operating periods may apply. Limited Operating Period Guidelines from the June 2004 Conservation Strategy for the California Spotted Owl (*Strix occidentalis, occidentalis*) on the National Forest of Southern California will be in place, unless surveys determine that spotted owls are not nesting within proximity of the project. If protocol surveys determine that spotted owls are nesting within 0.25 miles of the project area, or that Spotted Owl's Protected Activity Center (PAC) is within 0.25 miles of the project area, project activities may not occur in the area from February 1-August 15.
10. Fuel Management Guidelines prescribed in the June 2004 Conservation Strategy for the California Spotted Owl (*Strix occidentalis, occidentalis*) on the National Forests of Southern California will also be in place to protect Nest Stands, PACs, and Home Range

- Cores (HRCs).** This includes indirect fuel management, monitoring, vegetation treatments designed to improve Spotted Owl habitat, and the application of guidelines described in Table 2 of the June 2004 Conservation Strategy.
11. TEPCS plants observed within the project area will be flagged and treatments will be designed to minimize negative impacts.
 12. Riparian Areas:
 - a. For riparian areas, the Riparian Conservation Area (RCA) guidelines from the 2005 Forest Plan will be used (Appendix E). All treatments will be consistent with FSH 2509.22- Soil and Water Conservation Practices Handbook and Best Management Practices. This will ensure that ground-disturbing activities will not contribute additional sediment to any streams or lakes. Where prescribed burns are planned, no direct burning will occur in the RCA. Fire may enter those areas by “backing” downslope, burning the understory at low intensity. However, no effort will be made to apply fire directly to those areas or start a hot fire upwind that would intentionally move into the riparian buffer zones. To the extent possible, low creeping fires would be used near riparian areas, minimizing the burning/thinning of cottonwoods, alders, willows, and other riparian overstory.
 - b. Generally encroachment barriers to protect riparian habitat are to remain in place. If any are removed they will be replaced once the project is complete.
 - c. Construction of firebreaks within riparian habitat will be avoided except where hand lines have to cross riparian zones. Those short lines will be constructed and maintained with hand crews using hand tools and chainsaws. The width will be kept to a minimum and the length of hand lines in riparian will also be kept to a minimum
 - d. Erosion control techniques will be used to minimize and reduce sedimentation in the riparian habitats. Exposed slopes within the project area will be water bared and other techniques will be utilized in accordance with best management practices (BMP) for erosion control.
 13. **General Chaparral Habitat:** The burn prescription objective for chaparral will include fire with a high enough intensity to induce germination of obligate seeding species such as cup berry ceanothus, and bigberry manzanita.
 14. FSM 2081.03 directs the Forest Service to require all equipment be cleaned when working a site contaminated with noxious weeds. The following management actions will be used to prevent or minimize the spread of noxious weeds:
 - a. **Wash all equipment and vehicles:** Vehicles and all equipment must be washed before and after entering all project sites. This includes wheels, undercarriages, bumpers and all parts of the vehicle. In addition, all tools such as chain saws, hand clippers, pruners etc. must also be washed before and after entering all project sites. For example

example vehicle traveling into contaminated areas are the main dispersal mechanism for yellow star –thistle. All washing must take place where rinse water is collected and disposed of in a sanitary sewer or a landfill.

- b. Keep written logs: when vehicle are washed a daily log must be kept stating

Location

Date and time

Method used

Equipment washed

Name of responsible crew member

- c. Turn in written logs: these written logs will be turned in weekly. Contractors should turn in written logs to the COR. Forest Service staff should turn in written logs to the project manager or to the Forest Botanist.
- d. Site inspection for new infestations of noxious weeds during the project and upon completion of each unit will occur prior to acceptance of the unit. If new infestations are found a plan for treatment of the unit will be developed and completed. The plan may include methods to reduce or eliminate the infestation and limit the spread of the infestation to new units or other areas.
15. Freshly cut green conifer stumps will be treated with Sporax to prevent the establishment of annosum root disease. Application of Sporax will follow all State and Federal laws, regulations, rules and Forest Service policy for application of pesticides.
16. No Sporax will be stored within the 100 meters (328ft) buffer zone adjacent to perennial streams, or within 30 meters (98ft) of the buffer for an intermittent stream.
17. Any known heritage sites will be avoided by project activities.
18. No mechanical treatment or other ground disturbing activities will be used in areas not cleared by heritage resource monitoring.
19. Pile creation is not a preference for the district but is being left as an option for implementation. When piles are created, and when possible, the piles will be treated in the same season they are created so as to minimize the fuels accumulation on the forest.
20. All heavy equipment cleaning guidelines and other project design criteria set forth in the BE/BA will be incorporated into the task orders for contracts and in house work.