Big Creek Plantation Pre-commercial Thinning 2 (26920)

Draft Decision Memo

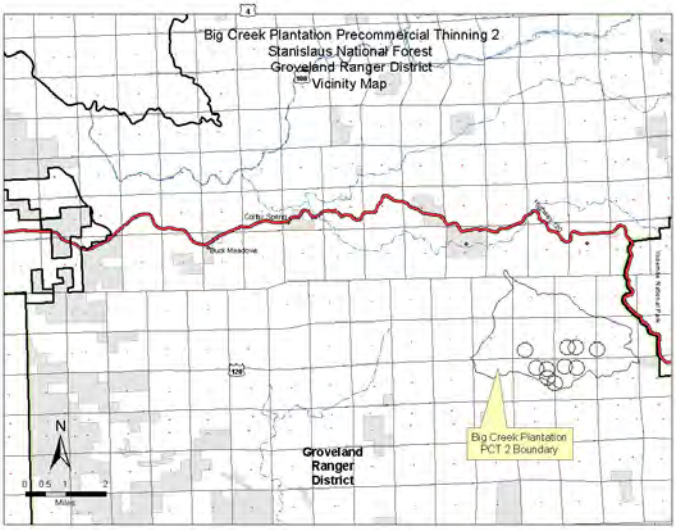
Stanislaus National Forest
Groveland Ranger District
Tuolumne County, California

Background

This memo provides documentation, pursuant to the National Environmental Policy Act (NEPA), related to pre-commercial thinning of plantations. These plantations were established in 1990 and 1991 following the 1987 Stanislaus Complex Fire. The Stanislaus National Forest, Groveland Ranger District proposes to mechanically masticate, hand thin and burn piles of vegetation for fuel reduction and plantation release. The pre-commercial thinning and brush removal will improve the growth of existing trees and reduce fire hazard in these areas by decreasing the density of the stands and removing the existing solid brush component and excess trees that are competing heavily with the plantation trees. The existing condition has a high probability of burning at high intensity if a fire occurred under typical summer conditions and control would be difficult. Shredding brush and small trees that contribute to the fuel ladder will reduce the risk of resource loss and create a break in the continuity of fuels, providing manageable control areas for suppression forces.

Project Location

The Big Creek Plantation Pre-commercial Thinning 2 is located in Sections 7, 8, 9, 17, 18 T2S, R19E in Tuolumne County, California. The project is approximately 20 miles east of the Groveland Ranger Station and can be accessed from State Highway 120 to Forest Service Road # 2S30 at Crocker Road.



Proposed Action

The Groveland District Ranger proposes the following site-specific treatments to achieve desired conditions for the project area. The table below summarizes the proposed actions for each stand. See attached map for specific treatment locations.

Table 1 Proposed Action Treatments

Stand	Acres	Treatment		
		Masticate	Hand/Pile/Burn	None
29273	136	81	14	41
29295	40	40		
29300	4	4		
29301 North	10	9	1	
29301 South	13	12	1	
29305	57	57		
29315	16	16		
30184	71	67	4	
30188	38	36	2	
30189	10	10		
30190	3	3		
TOTAL	398	335	22	41

Descriptions of the treatment activities

- Mastication: Brush and small trees up to 9” diameter would be shredded to chips and pieces less than 2 feet in length. This material would be left on site as mulch. Mastication is proposed on 335 acres.
- Hand Treatments: Conduct hand treatments in rocky and steep areas of the units where slopes exceed 45%, as well as in sensitive areas that need treatments. The hand treatments would consist of the cutting of brush and small conifer trees with chainsaws, then piling and burning, or chipping of dead and live vegetation. This would include trees less than 9” diameter. Hand treatment would be conducted on 22 acres.

Management Requirements

Air Quality

An approved Burn Plan is required for prescribed burning on the Stanislaus National Forest. A Smoke Management Plan is a part of the Burn Plan. The Smoke Plan would be the basis for obtaining a burning permit from the Tuolumne County Air Pollution Control Board. To minimize the effects of prescribed burning on air quality, monitoring, mitigation and contingency measures would be identified in the Smoke Management Plan. Desirable meteorological conditions such as favorable mixing layer and transport winds would be required in the Smoke Management Plan to facilitate venting and dispersion of smoke from the project area.

Conduct prescribed burning in accordance with Title 17, Smoke Management Agriculture and Prescribed Burning as required by the California Air Resources Board.

Fuels

1. Increase protection of interface and private lands.
2. Design fuel treatments to reduce flame lengths, to reduce rate of spread, and increase fireline production levels.

Heritage Resources

Archaeological sites in the project area would be protected from all ground disturbing activities associated with mechanical treatment during all phases of this project. In the event that any new heritage sites are discovered during project implementation, the District Archaeologist would be notified and the area flagged and avoided during the remaining project implementation. Hand work may take place within archaeological sites but no piles of cut vegetation are to be made within sites.

Wildlife

1. Retain all riparian hardwood vegetation, such as maple, dogwood, alder and willow. Where feasible and where it occurs in a stand, retain less common shrub species such as elderberry, redberry and coffeeberry (*Rhamnus* sp.), chokecherry, bittercherry, and Sierra plum (*Prunus* sp.). Retain all other hardwood tree species greater than 12" diameter at breast height. Retain additional smaller diameter hardwood trees wherever feasible in order to provide important cover and forage habitat for wildlife species.
2. Retain a vegetated buffer of 25 feet on either side of intermittent drainages in units 27273, 29315 and 30188 to provide thermal and hiding cover for wildlife. Within the buffer area, up to 50% of the vegetation may be removed in discontinuous blocks less than 50 feet in length.
3. Create openings around existing oak trees to reduce competition and to stimulate growth. Remove conifers from within the drip line of mature trees and 20 feet away from any sapling or re-sprouted trees.
4. Retain a diversity of brush species. Avoid shredding shrub species other than the targeted deer brush, buck brush, and manzanita. This is intended to retain other shrub species, including elderberry, redberry and coffeeberry, chokecherry, bittercherry, and Sierra plum, which are beneficial for wildlife. This does not include non-native Himalayan blackberry (*Rubus discolor*), if present.
5. Retain wildlife screening along roads 1S12, 1S13, 2S25 and 2S30. Screening will be set back up to 70 feet in discontinuous segments with gaps less than 50 feet in length and staggered so as to limit visibility into the stand, while not providing continuous fuels. Screening shall be supplemented with features such as cut banks or rock outcrops, which will also prevent visibility into the stand.
6. No mechanical activities shall occur within ¼ mile of known spotted owl PAC boundaries during the Limited Operating Period (LOP) listed below. This LOP does not apply to laying out units or early season burning operations and may be reduced to a ¼ mile area around a nest site if surveys are conducted, or may be lifted altogether, at the discretion of the district wildlife biologist, if owls are not nesting or are not likely to suffer from disturbance from the activity.

Table 2 Limited Operating Period/ Units Effected

Species	PAC/ Territory	Unit	Limited Operating Period (No Mechanical Operations)
California Spotted Owl			March 1 – August 15
	TL-011	29273 and 30188	

If breeding spotted owls, northern goshawks or great gray owls are discovered within 1/2 mile of the project area outside a designated PAC prior to or during project activities, the district wildlife biologist will be notified and mechanical activities must comply with the following LOPs:

Great gray owl:	March 1 – August 15
Spotted owl:	March 1- August 15
Goshawk:	February 15- September 15

Sensitive Plant Protection

In order to reduce, minimize or alleviate possible adverse effects to Sensitive Plants, the following management requirements would be implemented with the activities of the Big Creek Plantation Pre-commercial Thinning Project:

1. *Clarkia australis* – Will be protected in the following ways:

a. During the non-growing period, shredding and hand removal of vegetation such as brush and small trees may occur within occurrences of *Clarkia australis*. The non–growing period is approximately August 15 through December.

b. If shredding or hand removal of vegetation are implemented during the growing period (approximately December 1 to August 15), within occurrences larger than one acre, one acre of each site containing the highest concentration of plants and suitable habitat, preferably with good exposure to sunlight, will be flagged and avoided by the project activities. Occurrences smaller than 1 acre will be flagged and avoided.

c. Debris from shredding will not be allowed to accumulate so deeply or densely that the soil surface is completely covered within *Clarkia australis* occurrences.

d. Debris will not be hand piled or burned within *Clarkia australis* occurrences.

2. Flag and avoid all other Sensitive Plant species occurrences.

Sensitive Plant Monitoring

The objective of monitoring Sensitive Plant occurrences is to ensure that the project design, including the Sensitive Plant protective measures, are sufficient to protect these resources.

1. Monitoring should take place during project activities and directly after project activities finish in the vicinity of Sensitive Plants to ensure that protective measures are sufficient. This monitoring can be conducted by the Forest Service project inspector concurrently with project inspections. Any occurrences or suitable habitat areas which are impacted other than as allowed in the management requirements shall be reported immediately to the District Botanist or her representative.
2. Monitoring of Sensitive Plant occurrences impacted during the non-growing period should take place every two years for six years to determine whether impacts will have lasting adverse effects.
3. Monitoring of occurrences impacted during the growing period should take place yearly for five years to determine whether or not the occurrences are still extant (have not been extirpated) and to determine whether impacts will have lasting adverse effects.

Noxious Weeds

In order to prevent the introduction of new noxious weed infestations and the spread of existing noxious weeds, the following apply:

1. All off road equipment, road construction equipment, clothing, particularly footwear, and other equipment including transport vehicles should be free of soil, seeds, plant parts, or other debris in order to prevent new infestations of noxious weeds.

Soils and Hydrology

All units presently meet Region 5 Soil Quality Standards (USDA, 1995a). Existing levels of soil disturbance are estimated to be less than 5%. The project is designed to meet Region 5 Soil Quality Standards (USDA, 1995a.) Soil Quality Standards (SQSs) protect soil and soil productivity and conform to the January 2004 Sierra Nevada Forest Plan Amendment.

Mechanical Treatment Mitigation Requirements

1. Soil Environmental Health: To protect large downed logs, the soils scientist for this project recommended leaving downed logs larger than 16 inches diameter. Due to cost and equipment limitations, this project will not shred logs larger than 9 inches diameter.
2. Soil Erosion and Loss: Mechanical equipment should be limited to tracking on slopes of less than 45%; the articulating arm can be used to access slopes greater than 45%. Stands 29300 and

29301S have areas in the southern part of the units that contain slopes that limit of the use of mechanical equipment; extent is estimated not to exceed 10 percent. Operator should avoid creating ruts perpendicular to the contour in excess of 100 feet in length.

3. Soil Porosity: Time of operation should be restricted to the dry season, typically after June 15th. Several project units contain ephemeral stream drainages that will hold soil moisture later than typical due to aspects and site specific factors. The soil scientist can advise the project manager on soil moisture condition. Mechanical equipment should not be permitted to enter areas with hydric soils and/or hydric vegetation. Soils in these areas could be detrimentally compacted due to high soil moistures throughout the year and high concentrations of organic matter. These areas would be obviously flagged in order to assist equipment operator in identification.
4. Topsoil Depth: Several units contain soils that have a moderate to high displacement hazard. Operations would occur during the dry season as specified in the soil porosity recommendations. Equipment operator should be advised to avoid excessive spin turning or operating in ways that have a greater than average impact to soil cover and soils.
5. Stands 29305, 29315 contain several wet meadows, areas of hydric vegetation and hydric soils. These areas would be flagged and mechanical equipment excluded; extent is estimated not to exceed 5 percent.
6. Land Allocations and Forest Direction:

   Riparian Conservation Area (RCA) boundaries are described in the following table.

   Table 3 Riparian Conservation Area widths for Big Creek Plantations

Aquatic Feature	RCA Width	Delineation of RCA
Perennial Streams	300 feet	On each side of the stream bank, measured from the bank full edge.
Seasonally Flowing Streams, ephemeral and intermittent	150 feet	On each side of steam bank, measured from the bank full edge 150 feet.
Streams in Inner Gorge	n/a	Top of inner gorge
Special Aquatic Features: lakes, wet meadows, bogs, fens, wetlands, vernal pools and springs, or perennial streams with riparian conditions extending more than 150 feet from edge of stream bank or seasonally flowing streams with riparian condition extending more than 50 feet from edge of stream bank.	300 feet	From edge of the feature or the riparian vegetation, whichever width is greater.
Other hydrological or topographic depressions without a defined channel.		As mapped or marked on the ground or otherwise indicated.

7. Best Management Practice (BMP 1.8)
   a. Low ground pressure equipment would be allowed into intermittent and perennial RCAs ONLY in areas with slopes < 25%, and in areas designated by the contract administrator, after coordinating with the district hydrologist.

The exclusion zone starts at:

1. No equipment is allowed within 15 feet of the edge of the active channel where slopes rise uniformly from the stream, or at the outer edge of the following features, whichever is the furthest from the stream.
2. The first slope-break adjacent to the channel (e.g., streambank, inner gorge).
3. Flat or nearly flat ground adjacent to the channel (e.g., floodplain or terrace).
4. Obligate riparian shrub and/or tree communities associated with any of the above.

b. Mastication equipment would avoid working in areas with little relief between the stream channel and upland, where there is adjacent meadow, riparian vegetation, or wet conditions. Entry into units with this low relief will only be made as directed by the contract administrator. Machine track distance from such drainages will be increased based on the presence of riparian vegetation, including wet grasses and sedges, and the distance will be adequate to protect the hydrologic function and integrity of stream processes.

c. Mastication equipment operating within Ephemeral Stream RCAs: Buffers start 15 feet from the start of the exclusion zone. The exclusion zone begins at the edge of the channel where slopes rise uniformly or at the edge of the streambank, whichever is furthest from the stream.

8. Seeps, springs, meadows and riparian vegetation would be marked as non work areas. Where approved by the Contracting Officer, equipment would maintain machine tracks on dry, stable, upland soils, as far as possible from the seep, spring, or moist conditions, and the distance will be adequate to protect hydrologic function and integrity.
9. Limit stream crossings. Crossings would be designated by the contract administrator.
10. Operate only when 90% of the total tracked area is rutted less than 4 inches deep. Rutting depth is measured from the top of the undisturbed litter/duff layer to the top of the duff in the rut ("duff-to-duff").

- Operate only when continuous ground cover is retained in 90% of the total tracked area.
- Remove operation-created debris from stream channels.
- Retain obligate riparian shrubs and trees (i.e., willows, alders, aspens).
- Do not damage streambanks with equipment, and retain sufficient vegetation to maintain streambank stability.

14. BMP1-19: Fuel Storage: Servicing and refueling of equipment could be completed in a designated area outside of the RCA and within areas designated by the project supervisor.
BMP 2-21: Servicing and Refueling (All Approved Locations): Fuel storage and equipment re-fueling and servicing would be conducted outside of the RCA and special aquatic features, such as seep, springs and moist areas.

BMP 5-2: Slope Limitation (Mechanical Practices): Mechanical treatment by heavy equipment would be limited to slopes less than 35%. Mechanical practices for low ground pressure equipment are limited to 45% slope.

BMP 7-6: Water Quality Monitoring (random selection process): The BMP Evaluation Program would be utilized to determine implementation success and effectiveness.

Proposed Decision

My proposed decision is to implement the proposed action as described above.

My preliminary assessment is that this proposal falls within a category of actions listed in the Forest Service Handbook (FSH) that are excluded from documentation in an Environmental Assessment (EA) or Environmental Impact Statement (EIS). No extraordinary circumstances potentially having effects which

may significantly affect the environment would preclude use of the category as per Forest Service Handbook (FSH) 1909.15 Chapter 31.2 (6) Timber stand and/or wildlife habitat improvement activities which do not include the use of herbicides and do not require more than one mile of low standard road construction (service level D, FSH 7709.56).

Resource specialists provided input covering fuels, heritage, noxious weeds, sensitive plants, silviculture, soils, watershed, and wildlife, and are included in the project file. I considered their recommendations in making this decision. Specific finding and mitigations included in this decision are described in the proposed action.

Reasons for the Proposed Decision

In summary, I propose this decision to implement the proposed action for the following reasons:

- The proposed action is being undertaken to reduce the fuel load and ladder within these plantations, reducing the susceptibility to catastrophic fire as well as reducing inter tree and brush competition.
- The environmental impact of the proposed action is minimal, and consists of small tree removal within existing plantations. No threatened, endangered or sensitive species will be adversely affected by the proposed treatment. Cultural resources that are known to exist within the project area are identified and will be avoided during project implementation. All practicable means to avoid or minimize environmental harm have been adopted.

Public Involvement

The Forest Service first listed the Big Creek Plantation Pre-commercial Thinning 2 in the January 2009 issue of the Stanislaus National Forest Schedule of Proposed Actions (SOPA). The Forest distributed the SOPA to about 160 parties, and it is available on the internet (http://www.fs.fed.us/r5/stanislaus/project/sopa).

On May 24, 2007, the Forest sent a scoping letter to eight individuals, permittees, organizations, and agencies interested in this project. The letter requested comments on the Proposed Action. Three interested parties submitted letters, e-mails or verbal comments. Comments are attached.

Findings Required by Other Laws

This action is consistent with the Stanislaus National Forest Land and Resource Management Plan, as amended. This action is consistent with the direction contained within the National Forest Management Act (1976) Sec. 4.(d)(1), stating that "it is the policy of Congress that all forested lands in the National Forest System shall be maintained in appropriate forest cover with species of trees, degree of stocking, rate of growth and conditions of stands designed to secure the maximum benefits of multiple use sustained yield management in accordance with land management plans."

Contact Person

For further information concerning this action, please contact Kim Williams, 24545 Hwy 120 Groveland CA, 95321, 209-962-7825 ext 559, kwilliams02@fs.fed.us