



United States
Department of
Agriculture

Forest
Service

Swan Lake
Ranger District
(406) 837-7500
Fax (406) 837-7503

200 Ranger Station Road
Bigfork, MT 59911

File Code: 1950

Date: January 12, 2018

Request for Public Input

BUG CREEK FOREST HEALTH AND FUELS REDUCTION PROJECT PROPOSAL

The Swan Lake Ranger District of the Flathead National Forest is seeking public input on the proposed Bug Creek Project, located in the Crane Mountain area southeast of Bigfork. The purpose and need for the project includes the following: improve forest stand conditions related to vegetative structure and species composition; reduce the associated risk of high-severity landscape fire within the Wildland Urban Interface (WUI); provide for a safer environment for the public and firefighters should a wildland fire occur within the proposed treatment areas; increase the probability of stopping wildland fires on National Forest Service administered lands before they burn onto private lands; maintain and improve terrestrial wildlife species habitat and security; provide commercial and personal-use wood products for the local economy; provide quality outdoor recreation opportunities; and create and maintain a cost-efficient road network for long term resource management.

The proposal also includes a variety of vegetation treatments including regeneration harvest, commercial thin, pre-commercial thinning, understory fuel treatment, and prescribed burning on approximately 5016 acres. To facilitate the vegetation treatments, approximately 17.1 miles of system road could be constructed or reconstructed then closed and placed in stored status for future use. Approximately 5.4 miles of temporary roads would be constructed and then reclaimed following use. The proposal includes the development of up to 15 miles of new trails (for motorized or non-motorized use), as well as re-opening a quarry.

We included you on our mailing list for this project because you have expressed interest in this or other projects in the past, or you own property adjacent to NFS lands in the vicinity of the project area. If you wish to remain on the mailing list for this project, please let us know either by filling in your name and address on the enclosed Comment Sheet and returning it via the USPS or e-mailing us at comments-northern-flathead-swan-lake@fs.fed.us. If we do not hear from you, your name will be removed. Please feel free to share this letter with neighbors or other interested parties in the event we have missed someone.

We are requesting comments from you during this scoping period, ending **February 16, 2018**. This comment period provides those interested in or affected by this proposal an opportunity to make their concerns known and help identify issues. If you do not have any issues with the proposal at this time, please still reply if you would like to stay on the mailing list for this project.

Only individuals or entities who submit timely and specific written comments about this proposed project during this or another public comment period established by the responsible official will be eligible to file an objection to the decision pursuant to 36 CFR 218 Subparts A and B. Individual members of an entity must submit their own individual comments in order to have eligibility to object as an individual. It is the responsibility of the sender to ensure timely receipt of any comments submitted.

A document and map describing the need for management actions in the area is at: www.fs.usda.gov/projects/flathead/landmanagement/projects. For more information about the project, contact Project Leader Chantelle DeLay at the number below. Comments should include: 1) name, address, phone number, and organization represented, if any; 2) title of project on which the comments are being submitted; 3) specific facts and supporting information that you believe should be considered.

Please address your comments to Project Leader Chantelle DeLay at the above address or fax number (in the letterhead). To submit comments electronically, please send to: comments-northern-flathead-swan-lake@fs.fed.us. Electronic comments must be submitted in rich text format (.rtf), Word (.doc), Adobe Acrobat (.pdf), or Word Perfect format. The subject line must contain the name of the project for which you are submitting comments: "Bug Creek Project." You should normally receive an automated electronic acknowledgement from us as confirmation of receipt. If you do not receive an automated acknowledgement of the receipt of comments, it is your responsibility to ensure timely receipt by other means. Hand-delivered comments should be taken to the ranger station office between 8:00 a.m. and 4:30 p.m. Please see address on letterhead. Oral comments must be provided during normal business hours to Chantelle via telephone at the number below or in person.

A public meeting will be held at the Swan Lake Ranger Station, 200 Ranger Station Road, Bigfork, MT on **February 6, 2018 from 5:00 pm – 6:30 pm.**

Written, facsimile, hand-delivered, oral, and electronic comments will be accepted through **February 16, 2018**. Comments received in response to this solicitation, including names, addresses, email addresses, and phone numbers of those who comment, will be considered part of the public record, and will be available for public inspection. Because of the enormous amount of research regarding forestry practices and methods, if you cite literature in your comments please provide us with a complete bibliography or a copy of the referenced materials if they are not commonly available.

I appreciate your interest in this project, and I thank you for your help with developing our project. To obtain additional information about this project, please contact me (406) 837-7501, or Chantelle DeLay at (406) 758-5331.

Sincerely,



Acting District Ranger

Enclosures (Bug Creek Project Proposed Action and Transportation Maps)

COMMENT SHEET
Bug Creek Project

Your comments and recommendations will help us identify issues associated with the Bug Creek Project and focus our efforts during the analysis process.

Please fill out and return this form by **February 16, 2018**. Additional comments may be made on a separate sheet of paper and included as well.

NAME:

ORGANIZATION /

ADDRESS:

COMMENTS & RECOMMENDATIONS:

Your Comments are Important!



This comment period provides those interested in or affected by this proposal an opportunity to make their concerns known prior to a decision being made by the Responsible Official. Only those who provide timely and substantive comments will be eligible to object the decision pursuant to the 36 CFR 218 Subparts A and B. Comments received in response to this solicitation, including names, addresses, email addresses, and phone numbers of those who comment, will be considered part of the public record, and will be available for public inspection.

FOLD HERE AND MAIL BY February 16, 2018

FROM:



District Ranger
Swan Lake Ranger District
200 Ranger Station Road
Bigfork, MT 59911



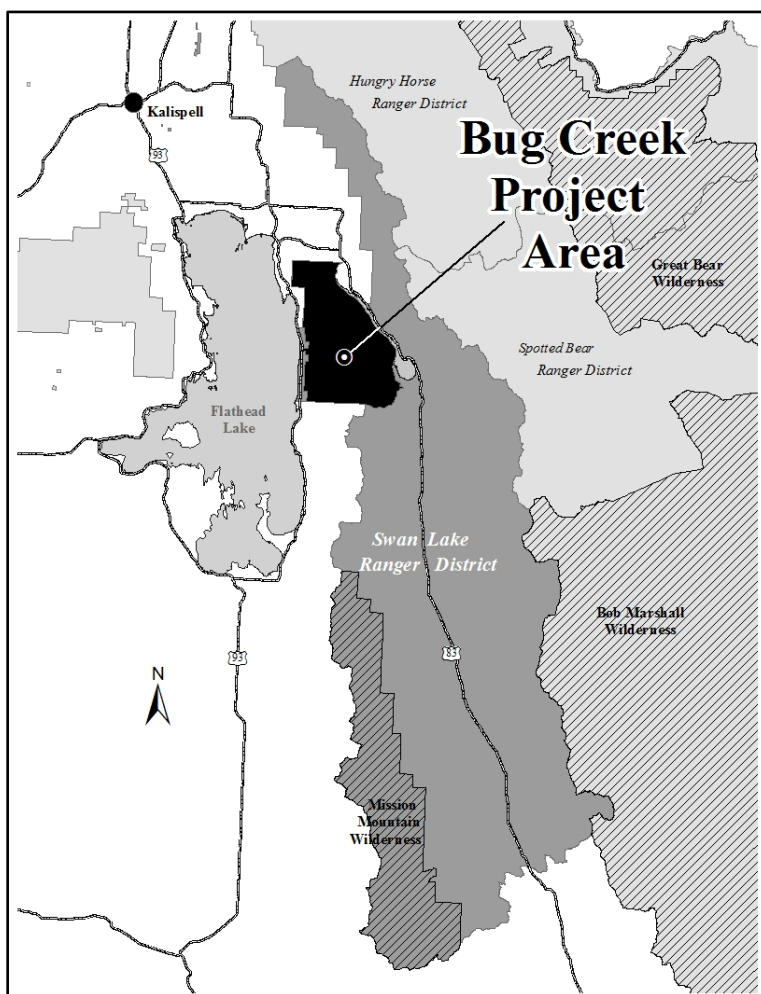
BUG CREEK INTEGRATED RESOURCE MANAGEMENT PROJECT

Purpose, Need for Action, and Proposed Activities

PROJECT AREA

The Bug Creek Project Area lies on the east and west sides of Crane Mountain between Flathead Lake and Swan Lake, on the Swan Lake Ranger District, Flathead National Forest. The Bug Creek Project is located two miles southeast of Bigfork and one mile south of Ferndale Road, east of Flathead Lake, west of Highway 83, and northwest of Swan River State Forest. The Bug Creek Project Area (36,740 acres) includes 3777 acres of private land, and 409 acres of State of Montana lands. Elevations within the Project Area range from 2920 feet to 6080 feet. There are 22,760 acres of Wildland Urban Interface (WUI) in the project area, of which 18,471 acres are on Forest Service land.

FIGURE 1. VICINITY MAP OF THE BUG CREEK PROJECT AREA



PURPOSES

The purposes of the Bug Creek Integrated Resource Management Project for the project area are to:

- 1) Improve forest stand conditions related to vegetative structure and species composition.
- 2) Reduce the associated risk of high-severity landscape fire within the Wildland Urban Interface (WUI).
- 3) Provide for a safer environment for the public and firefighters should a wildland fire occur within the proposed treatment areas.
- 4) Increase the probability of stopping wildland fires on National Forest Service administered lands before they burn onto private lands.
- 5) Maintain and improve terrestrial wildlife species habitat and security.
- 6) Provide quality outdoor recreation opportunities.
- 7) Create and maintain a cost-efficient road network for long term resource management that retains access for land management, wildland fire suppression, and recreation.

The actions proposed for this project, which are driven by the project's purposes, would move the resources in the project area toward the desired future conditions identified in the Forest's Land Use Management Plan. Vegetation management activities are expected to start in 2020 and last approximately 10 years.

NEEDS FOR ACTION

The following are each resource's needs for the actions in the Bug Creek project.

VEGETATION/FUELS

The need for vegetation treatments derives from findings of stand diagnoses prepared by the Forest that compare current conditions to desired conditions. The desired conditions from this project are the need to increase the presence and dominance of ponderosa pine, western white pine and western larch in the warm moist potential vegetation group, the need to increase the large and very large tree size classes, and the need to reduce forest densities to improve wildlife habitat, forest resilience and productivity on suitable lands.

The Bug Creek project area consists of a mosaic of forest structures ranging from seedling stands to old-growth stands with multiple stories. This mosaic is a result of timber management, fire suppression, and natural disturbance processes. The major forest types in the project area consist of western redcedar, grand fir, Douglas-fir, western larch, and lodgepole pine. Most of the area outside of the East Shore Research Natural Area (RNA) has had some level of harvest activity and reforestation. The majority of the project area has mixed species stands. These stands are complex with high variation in species and structure. Douglas-fir, grand fir, western redcedar and western larch are the primary species in these stands. Other species found in these stands include Engelmann spruce, lodgepole pine, subalpine fir, western white pine and ponderosa pine. Douglas-fir, subalpine fir, and western redcedar dominate the understory stands with multiple stories in the absence of disturbance.

Stands originating from regeneration harvests comprise a large portion of the project area outside of the East Shore RNA. These stands are composed primarily of western larch, western white pine, lodgepole pine and Douglas-fir. These stands are generally in good condition and currently healthy. However, tree

growth is beginning to slow due to overstocking. High tree densities are also adversely affecting planted white pine blister rust-resistant western white pine in the project area.

There also exist many stands that were selectively harvested. The selection harvests occurred from the late 19th century until the mid-20th century in the lower elevation portions of the project area. These harvests focused on removing primarily large diameter western larch, western white pine and ponderosa pine. These stands currently consist of shade-tolerant tree species that are susceptible to root disease and damage from wildland fire.

Insect and disease processes also influence the forest vegetation in the Bug Creek project area. Dwarf mistletoe affects lodgepole pine, western larch, and Douglas-fir within the area. Root disease fungi are active in some stands where Douglas-fir and grand fir are the dominant species. Root disease provides an opportunity for Douglas-fir beetle to infest and kill Douglas-fir in the area. Mountain pine beetle currently is not at epidemic levels, but populations are evident in lodgepole pine stands in the Bug Creek project area.

Western white pine in the project area is being negatively impacted by the non-native white pine blister rust. Western white pine has been substantially reduced over its native range by these pests and now forms a small component of mixed conifer stands on the Flathead National Forest compared to historical averages.

Effective wildfire suppression and exclusion within the Bug Creek project area has promoted a greater abundance of late-seral, shade-tolerant species, which in turn has resulted in more multi-storied stand structures and higher stand densities. This in turn has altered current fire regimes from natural fire regimes. Historically, the project area is dominated by fire regime groups III and IV and to lesser extent fire regime groups I and V. Fire regime groups are further defined in Table 1. The departure of current fire regimes from natural fire regimes is responsible for fuel accumulations that support wildfires with uncharacteristically severe effects. Fire behavior modeling for the Bug Creek project area shows current conditions exhibit crown fire potential and flame lengths exceeding four feet. Four feet flame lengths is the limit for ground firefighting resources using hand tools.

The vegetation condition class over most of the Bug Creek project area is classified as either having low to moderate departure. The mean fire return interval over the project area varies between 21-200 years (LANDFIRE data). This has resulted in much of the project area missing between 0 and 6 fire return intervals. Since 1970, the Bug Creek project area has experienced 93 small wildfires of which approximately 46 percent were human caused. Fire history records prior to 1970 are not represented due to advances in technology and statistical fire tracking.

TABLE 1: FIRE REGIME GROUPS, FIRE FREQUENCY, SEVERITY, AND SEVERITY DESCRIPTIONS

Group	Frequency	Severity	Severity Description
I	0-35 years	Low/Mixed	Generally low-severity fires replacing less than 25% of the dominant overstory vegetation; can include mixed-severity fires that replace up to 75% of the overstory
II	0-35 years	Replacement	High-severity fires replacing greater than 75% of the dominant overstory vegetation
III	35-200 years	Mixed/Low	Generally mixed-severity; can also include low-severity fires
IV	35-200 years	Replacement	High-severity fires

Group	Frequency	Severity	Severity Description
V	200+ years	Replacement/Any severity	Generally replacement-severity; can include any severity type in this frequency range

Fire exclusion in the Bug Creek project area has also resulted in hazardous fuels conditions that pose substantial risk to values within the Wildland Urban Interface (WUI). The community of Ferndale is in close proximity to the project area and there are many permanent and vacation residences along the west shore of Swan Lake.

WILDLIFE

The project area provides a diversity of habitats for numerous wildlife species. Vegetation patterns and wildlife habitats have been altered, primarily by forest management activities and wildland fire suppression. Many of the old growth habitat areas are fragmented and many are abutted by abrupt edge. Treatment of some units will move the area towards a desired condition of increasing the quantity, patch size, and connectivity of old growth forests in the future. Forested connections between many patches have been narrowed. Much of the project area is in warm-moist coniferous forest that could be maintained or improved to contribute to fisher habitat. Numerous ponds, seeps, and streams provide a diversity of habitat for a wide variety of wildlife species. Snags and large downed-wood habitat are lacking in most previously logged areas. Fire suppression may have altered the availability of open-understory forested habitat for species such as the goshawk and flammulated owl in the western part of the project area where warm-dry potential vegetation types exist. Mostly due to elevation and snowpack, the does not support deer or elk winter range, although there is ample habitat for ungulates within the project area. Secure habitat for grizzly bears and elk during hunting season is abundant. Potential feeding and denning habitats for lynx are abundant and well distributed, especially in the cool-moist vegetation types of the project area. Reports of wolf presence have been consistent in recent years. For numerous wildlife species, reducing closed road densities can decrease displacement and mortality risk.

RECREATION

The Bug Creek Project Area is visited by many members of the public due to its close proximity to the communities of Ferndale and Bigfork. Currently there are three non-motorized trails in the Crane Mountain Area (#373 Phillips, #314 Crane Creek, and #76 Beardance) that were built for activities such as hiking, equestrian, and cross-country mountain bike use. There is also a network of unauthorized trails in this area not currently being managed by the Forest Service. There is a growing interest by the public for additional recreational opportunities in the Crane Mountain Area as the District has received requests from the public to expand the non-motorized trail system in the project area. One recreation component of this proposal is to provide a range of trail experiences for hikers, mountain bikers, and horse riders to connect to the local community with the Flathead National Forest. The proposed non-motorized trail system would provide a connection from the existing trails and some unauthorized segments to newly constructed remote trails on NFS lands. The trail network would include a series of looping trails that provide opportunities for both short and progressively longer and more challenging excursions. The layout would allow users to choose the length and challenge of their excursion. Looping trails such as these often develop a preferred direction of travel, which further reduces user conflict and improves safety. In addition, by bringing segments of trail that are currently being used, onto the National Forest System, along with the help of volunteers and partners, the Forest Service can bring these trails in to standard for future resource protection, user safety, and curb illegal trail building.

Another concern in the Crane Mountain Area is the increased unauthorized motorized use which has led to increased road and trail violations, creation of new single and two track roads in pursuit of firewood, game, and off-highway vehicle activities. The violations have created both resource damage and social conflicts with the motorized and non-motorized trails being accessed from the Estes Lake Trail. The Estes Lake Trail currently has conflicting direction on what uses are allowed: the majority of the trail located on Forest Service administered land is open to motorized use; however the portion of the trail located nearest Estes Lake on State administered land is closed to motorized use. Another component of this proposal would correct the conflicting management direction for the Estes Lake Trail.

PROPOSED ACTIONS

A team of Resource Specialists developed a strategy designed to address the Purpose and Need for Action. The proposal includes management activities on National Forest lands within the Project Area.

TRANSPORTATION PROPOSALS SEPARATE FROM VEGETATION MANAGEMENT PROPOSALS

Approximately 83.9 miles of road were approved to be decommissioned from the Crane Mountain salvage decision (1996); however, 59.8 miles were not implemented. This project proposes to add the roads back on to the road system from decommissioning in the Crane Mountain salvage decision (Table 2 and Appendix A).

Additionally, 1.0 mile of road is proposed for decommissioning and 22.6 miles of road is proposed for ISS not associated with the 1996 Crane decision. Two barriers will be replaced with gates on NFSR's 9713 and 9714 to maintain drive through access for wildland fire suppression and general forest management access within the project area. These transportation proposals are defined below and displayed in Table 2.

- Road Decommissioning: Decommissioning removes roads from the landscape that are no longer needed for current or future resource management, pose a threat to water quality, or reduce wildlife security. Methods for decommissioning include either full re-contouring to restore the original ground slope, or where recontouring is not appropriate due to topography, the road surface would be scarified to reduce detrimental soil compaction. Furthermore, work involves, removing all stream-aligned and cross-drain culverts and drainage structures, installing water bars, seeding and fertilizing disturbed soil, and/or blocking the entrance and abandoning the road to allow re-vegetation. The resulting long-term reduction in the impacts produced by these roads would benefit streams and wildlife in the analysis area. Road decommissioning would lower total motorized route density.
- Intermittent Stored Service (ISS)/Impassable: The road is impassable and in a condition that does not need any maintenance. These roads will have all stream aligned culverts removed. Ditch relief pipes and/or water bars will be left in order to allow water to move across the landscape without threatening the road. Roads will not be counted in total motorized route density and the first 50 to 300 feet will be treated to make the road inaccessible to wheeled motorized vehicles. Roads may become impassable as a result of a variety of means, including but not limited to one or more of the following: natural vegetation growth, road entrance obliteration, scarified ground, fallen trees, boulders, culvert or bridge removal, etc. Roads will remain on the inventoried road system. Placing roads into ISS / Impassable, rather than decommissioning, allows the watershed and wildlife risks posed by roads to be minimized, while maintaining the road on the NFS road system for future use. These roads are not likely to be used for resource management activities within

the next 10 to 20 years and are being placed into ISS to provide secure wildlife habitat and reduced road maintenance costs. ISS roads would not be returned to the productive land base.

TABLE 2. TRANSPORTATION PROPOSALS (SEPARATE FROM VEGETATION MANAGEMENT PROPOSALS)

Transportation Proposals from 1996 Crane Decision	Miles
Add NFSR 498 to System Seasonally Open	7.0
Add NFSR 10617 to System Closed Yearlong Gate	2.1
Add to System Closed Yearlong Barriers	17.0
Add to System Intermittent Stored Service (ISS)/Impassable	32.8
Decommissioning	1.0
Transportation Proposals Not Associated with 1996 Crane Decision	
Intermittent Stored Service (ISS)/Impassable	22.6
Decommissioning	1.0

RECREATION

The proposed trail system would create and add approximately 15 miles of non-motorized trails to the National Forest Trail System for management and maintenance. The trail system would be located in the northern portion of the project area west of NFSR 498 and would incorporate both existing and new trail segments into the design. Please refer to Map 2 for locations of this proposed system. As stated above, adding these trails to the system would assist in responsible resource management and provide opportunities for management through partnership agreements to maintain these trails to Forest Service Standards. All trails would be maintained in compliance with the Trails Management Handbook, Forest Service Handbook (FSH) 2309.18.

The other recreation related proposed action is to change the Estes Lake Trail (1.6 miles) from being open to motorized and non-motorized use to being open only to non-motorized use. This would correct the conflicting management direction for this trail and minimize user conflict.

VEGETATION MANAGEMENT

The proposed action was designed to improve forest stand vegetative structure and species composition. A comparison of current stand structure and composition to the desired future conditions for each stand determined the proposed silvicultural treatments (Table 3 and Appendix B). Tree retention would emphasize hardwoods and the largest dominant and co-dominant root-firm trees, which are typically western larch, ponderosa pine and western white pine. Trees retained after treatments would be dispersed over the entire harvest unit as much as possible. The proposed action would minimize impacts to riparian areas.

TABLE 3. PROPOSED VEGETATION TREATMENT ACTIVITIES

Commercial Treatments	Acres
Clearcut	418
Seed Tree	1049
Shelterwood	40
Commercial Thin	896
Total Commercial Treatment Area	2403
Non-commercial Treatments	
Broadcast Burning	1460
Understory Fuels Reduction	116
Daylighting and Pruning of Western White Pine	53
Pre-commercial Thinning/Girdling	282
Pre-Commercial Thinning	674
Slashing	28
Total Non-commercial Treatment Area	2613
Total Treatment Acres	5016

Harvest activities would be implemented using tractor, cut-to-length, and cable logging systems.

Slash would be treated through a combination of the following: Whole tree yarding, lop and scatter, mastication, and/or excavator piling. Fuel accumulations at landings would be addressed through burning, chipping/masticating, and/or removal from National Forest lands. Prescribed fire treatments within timber units could include broadcast burning, pile burning and/or jackpot burning.

No harvest activity would occur within Riparian Habitat Zones. Some temporary road locations would occur within riparian areas and stream crossing would be necessary.

Shelterwood, seed tree, and clearcut are regeneration treatments that utilize timber harvesting to create a new forest stand of shade intolerant tree species including western larch, ponderosa pine and western white pine. These silvicultural methods would change the stands from large and medium tree size classes to the seedling stage. These stands would either regenerate naturally from seed or through planting. Shade-intolerant tree species would dominate for at least 20 to 80 years.

Commercial thinning would retain the healthiest trees with large, well-formed crowns. Leave tree selection would favor shade-intolerant and fire-resistant species, primarily western larch where available. These trees would then have more growing space, light and water to allow them to develop into large overstory trees with improved insect, disease, and fire resistance. Commercially thinned stands would not require reforestation. Fully stocked stands would remain after treatment and the size class would shift from medium and large to large and very large.

Some areas of past regeneration harvest are now growing high densities of sapling to pole sized trees (5 to 35 feet tall). Pre-commercial thinning is proposed in some of these stands that are within the WUI to reduce fuels and density. Pre-commercial thinning (PCT) may also include hand piling followed up with pile burning. These additional treatments would be implemented on a portion of the proposed acres that are adjacent to private property and roads. Some stands proposed for pre-commercial thinning contain overstory trees infested with dwarf mistletoe. Girdling these overstory trees will limit the spread of dwarf

mistletoe to the sapling/pole sized trees. A temporary increase in fuels would be experienced for up to five years diminishing each year as the material decomposes in areas not piled. Some sapling stands outside of the WUI containing a suitable amount of western white pine would be treated utilizing daylighting around individual western white pine followed by pruning these trees to minimize infection from white pine blister rust. Slashing is proposed in one stand in order to limit brush competition and facilitate successful establishment of shade intolerant species.

CREATION OF OPENINGS EXCEEDING FOREST PLAN MAXIMUM SIZE

Regional Forester policy (FSM 2470 R1 2400-2016-1) directs the maximum size of harvest openings created by even-aged silvicultural practices (e.g. seed tree, shelterwood, and clearcut harvest prescriptions). The proposed action could result in approximately 10 openings exceeding the maximum size. The large size of the openings are needed to address vegetation conditions, primarily root disease found across the landscape affecting Douglas-fir and grand fir. Intermediate treatments such as commercial thinning are unlikely to be effective and may actually increase the effects of root disease within those stands. FSM 2470 R1 2400-2016-1 requires 60-day public review and Regional Forester approval for creation of openings exceeding forest plan maximum size. This would occur prior to the signing of a decision for this project.

FUEL REDUCTION PROPOSALS

The proposed action would reduce hazardous fuel loading by treating a significant number of acres within and adjacent to the WUI to reduce potential for high intensity fire, provide for higher level of fire fighter safety, and reduce risk of catastrophic fire in the interface. Fuel loading would be reduced through timber harvest activities that also promote forest health. All activity-generated fuels would be treated. Stands within the WUI would be treated to increase tree spacing, reduce ladder fuels, and reduce canopy cover. Prescribed burning would be conducted for fuel reduction and site preparation where appropriate.

Understory fuels reduction is proposed in a few old growth stands adjacent to private property. Successful fire suppression allowed shade tolerant trees species to become established in these stands and alter the fire behavior from frequent, low intensity fires to high intensity stand replacement fires. Prescribed burning in these stands is not feasible due to the altered fire behavior and their close proximity to private developments. This non-commercial treatment would remove trees less than 7 inches diameter breast height from the stands in order to protect and maintain old growth conditions including large diameter trees, snags and down wood. No overstory trees would be removed.

Broadcast burning is proposed in mid to upper elevation conifer stands. Burning will lessen the intensity of wildfire, reduce the rate of spread of a wind-driven wildfire, increase the effectiveness of fire suppression, return the area to a more natural fire regime, and increase firefighter safety. Additionally, this project will rejuvenate browse and improve habitat by restoring natural openings favoring early spring exposures and increase snag availability for birds and small mammals. The prescribed burning will be accomplished using helicopter ignition and some hand ignition. Each unit could be ignited independently or if conditions allow, multiple units may be burned the same day. The implementation timeframe is contingent upon attaining favorable prescriptive burning conditions specified in the prescribed fire plan and atmospheric conditions favorable for smoke dispersal. In general, ignition will occur in either the spring or fall prescribed fire season. Ignition will create mostly low to moderate fire severity conditions and minimal spotting distances.

REFORESTATION RELATED TO VEGETATION MANAGEMENT

Where regeneration treatments are proposed, a combination of planting and natural regeneration is planned. Regeneration would emphasize establishment of long-lived shade intolerant species such as western larch, ponderosa pine, western white pine, and occasionally Douglas-fir. It is expected that some level of natural regeneration would occur in all regeneration units.

TRANSPORTATION MANAGEMENT RELATED TO VEGETATION MANAGEMENT

In addition to the transportation proposals previously discussed, additional travel management proposals are being made related to vegetation management (Table 4). Transportation proposals that are being made that are related to the vegetation management proposals include:

- **Haul Route Road Maintenance Best Management Practices (BMP):** The objectives of road maintenance are to reduce the concentration of sub-surface and surface water runoff, minimize road surface erosion, filter ditch water before entering streams, decrease the risk of culvert failures during peak runoff events, and provide for cost effective long term road maintenance. Maintenance work could include culvert installation, replacement of existing culverts with larger culverts, cleaning debris from culverts inlets or outlets, installation of drainage dips and surface water deflectors, placement of rip-rap to armor drainage structures, aggregate surface replacement, aggregate placement to reinforce wet surface areas, ditch construction and cleaning where needed, and surface blading to restore drainage efficiency of the road surface. These actions would bring the roads up to current BMP standards, better accommodate traffic and reduce deferred maintenance. Best Management Practices are required under Timber Sale Contracts prior to hauling of timber over these roads to meet state requirements.
- **Temporary Roads:** Some of the units would be accessed through temporary roads. All temporary roads would be rehabilitated following use, such that they would cease to function as roads. Temporary roads would be constructed to the minimum standards necessary for log hauling. Temporary road surface width would be limited to 12 feet wide plus turnouts for ground-based units and 14 feet wide plus turnouts for skyline-based units. Best Management Practices would be in place during use to maintain soil productivity and protect water quality.
- **System Road Construction:** System roads would be constructed to the minimum standards necessary for log haul and will be designated as Maintenance Level 1 roads placed in intermittent stored service (ISS) and managed as impassable after use. See intermittent stored service (ISS)/impassable definition on pg. 3 above.

TABLE 4. ROAD MANAGEMENT PROPOSALS RELATED TO VEGETATION MANAGEMENT

VEGETATION RELATED ROAD MANAGEMENT PROPOSALS	MILES
Road Maintenance BMPs	71.2
Total Temporary Road Construction	5.4
Subtotal: New Temporary Road Construction	3.2
Subtotal: Temporary Road on Existing Template	2.2
Total System Road Construction	17.1
Subtotal: New System Road Construction	4.9
Subtotal: System Road on Existing Template	12.2

In addition to road management proposals, the Bug Creek project proposes to re-open the Yew Creek quarry for rock riprap development for reconstruction activities on National Forest System Roads. This quarry would require use of 0.4 miles of historic road 5242.

APPENDIX A - DETAILED LIST OF ALL ROADS IN THE PROJECT AREA

NFSR Road No.	Name	Miles	Current Travel Management Strategy		1996 Crane Decision Travel Management Strategy	Bug Creek Proposed Travel Management Strategy
			Designation	Dates		
129	SWAN LAKE	0.941	OPEN	YEARLONG	No Action	No Action
129	SWAN LAKE	3.247	CLOSED	YEARLONG	No Action	No Action
498	MISSION DIVIDE	0.345	OPEN	YEARLONG	No Action	No Action
498	MISSION DIVIDE	8.895	OPEN	04/01 THRU 11/30	No Action	No Action
498	MISSION DIVIDE	6.990	OPEN	04/01 THRU 11/30	Decommission	Seasonally Open
498	MISSION DIVIDE	1.282	CLOSED	YEARLONG	Decommission	ISS / Impassable
1028	FLATHEAD LAKE CAMP	0.210	CLOSED	YEARLONG	No Action	No Action
5246	YEW FLATS	0.400	CLOSED	YEARLONG	No Action	ISS / Impassable
9700	ROSEWATER	0.800	CLOSED	YEARLONG	No Action	ISS / Impassable
9701	LODGEPOLE LANE	0.190	CLOSED	YEARLONG	No Action	No Action
9701	LODGEPOLE LANE	0.890	CLOSED	YEARLONG	No Action	ISS / Impassable
9702	SOUTH PARKER	2.400	CLOSED	YEARLONG	Decommission	ISS / Impassable
9703	TERRACE	1.600	CLOSED	YEARLONG	No Action	ISS / Impassable
9704	WOODS BAY	0.482	OPEN	04/01 THRU 11/30	No Action	No Action
9704	WOODS BAY	5.288	CLOSED	YEARLONG	No Action	No Action
9705	CRANE CREEK CUTOFF	0.270	CLOSED	YEARLONG	No Action	ISS / Impassable
9708	HENRY CREEK CUTOFF	4.200	CLOSED	YEARLONG	Decommission	Closed Yearlong Berm
9713	MISSION MIDWAY	0.073	OPEN	04/01 THRU 11/30	No Action	No Action
9713	MISSION MIDWAY	9.017	CLOSED	YEARLONG	No Action	No Action
9714	YEW CREEK	8.267	OPEN	04/01 THRU 11/30	No Action	No Action
9714	YEW CREEK	3.410	CLOSED	YEARLONG BERM	No Action	Closed Yearlong Gate
9716	LOWER STOPHER	3.100	CLOSED	YEARLONG	Decommission	Closed Yearlong Berm
9717	UPPER STOPHER	4.120	CLOSED	YEARLONG	Decommission	Closed Yearlong Berm
9720	MOUNTAIN LION	2.430	CLOSED	YEARLONG	Decommission	ISS
9723	QUARRY ROAD	0.400	CLOSED	YEARLONG	Decommission	Closed Yearlong Berm

NFSR Road No.	Name	Miles	Current Travel Management Strategy		1996 Crane Decision Travel Management Strategy	Bug Creek Proposed Travel Management Strategy
			Designation	Dates		
9730	BUG EXTENSION	0.900	CLOSED	YEARLONG	No Action	ISS / Impassable
9732	BUG TAKEOFF	0.053	OPEN	YEARLONG	No Action	No Action
9732	BUG TAKEOFF	1.247	CLOSED	YEARLONG	No Action	No Action
9737	BUG BOTTOM	0.910	CLOSED	YEARLONG	No Action	ISS / Impassable
9738	BUG OVERLOOK	1.090	CLOSED	YEARLONG	No Action	ISS / Impassable
9741	BUG SWITCHBACK	1.400	CLOSED	YEARLONG	No Action	ISS / Impassable
9742	BUG STUB	0.800	CLOSED	YEARLONG	No Action	ISS / Impassable
9745	UPPER BUG	4.950	OPEN	YEARLONG	No Action	No Action
9746	MIDDLE STOPHER	4.870	CLOSED	YEARLONG	Decommission	Closed Yearlong Berm
9751	NORTH SIDE CRANE CREEK	0.910	CLOSED	YEARLONG	No Action	No Action
9754	SOUTH SIDE CRANE	1.040	CLOSED	YEARLONG	Decommission	Closed Yearlong Berm
9755	NORTH SIDE HOWSLEY	0.139	OPEN	04/01 THRU 11/30	No Action	No Action
9755	NORTH SIDE HOWSLEY	3.211	CLOSED	YEARLONG	No Action	ISS / Impassable
9756	SOUTH SIDE HOWSLEY	0.860	CLOSED	YEARLONG	Decommission	ISS / Impassable
9757	NO-SEE-EM CREEK	2.220	CLOSED	YEARLONG	Decommission	ISS / Impassable
9765	PORCUPINE TWO	0.406	CLOSED	YEARLONG	Decommission	Closed Yearlong Berm
9765	PORCUPINE TWO	1.104	CLOSED	YEARLONG	Decommission	ISS / Impassable
9770	PORCUPINE FOUR	1.370	CLOSED	YEARLONG	Decommission	Closed Yearlong Berm
9776	BUG DROPOFF	0.930	CLOSED	YEARLONG	No Action	ISS / Impassable
9793	CRANE CONNECTION	1.200	CLOSED	YEARLONG	No Action	ISS / Impassable
9803	MISSION LOOKOUT	1.470	OPEN	04/01 THRU 11/30	No Action	No Action
9804	SOUTH MOUNTAIN LION	1.600	CLOSED	YEARLONG	Decommission	ISS / Impassable
9847	LOLO RIDGE	0.700	CLOSED	YEARLONG	Decommission	ISS / Impassable
9849	GUNDERSON BOTTOM	1.100	CLOSED	YEARLONG	Decommission	ISS / Impassable
9874	MIDDLE PARKER	0.880	CLOSED	YEARLONG	Decommission	ISS / Impassable
9885	NORTH PARKER	3.600	CLOSED	YEARLONG	Decommission	ISS / Impassable
9896	UPPER PARKER	1.960	CLOSED	YEARLONG	Decommission	ISS / Impassable
10135	WYMAN LAKES	0.850	CLOSED	YEARLONG	No Action	No Action
10136	WILLY'S WYMAN	0.353	CLOSED	YEARLONG	No Action	No Action

NFSR Road No.	Name	Miles	Current Travel Management Strategy		1996 Crane Decision Travel Management Strategy	Bug Creek Proposed Travel Management Strategy
			Designation	Dates		
10212	NORTH CRANE BREAKS	2.440	CLOSED	YEARLONG	No Action	ISS / Impassable
10215	HIGH CRANE CREEK	1.400	CLOSED	YEARLONG	No Action	No Action
10216	FIRST CRANE STUB	0.410	CLOSED	YEARLONG	No Action	No Action
10218	LOW CRANE CREEK	1.640	CLOSED	YEARLONG	Decommission	ISS / Impassable
10219	CAT GROUND STUB	0.550	CLOSED	YEARLONG	No Action	ISS / Impassable
10220	MIDDLE HENRY CREEK	0.910	CLOSED	YEARLONG	No Action	No Action
10221	HENRY CREEK STUB	0.270	CLOSED	YEARLONG	Decommission	Decommission
10222	CRANE TOP	1.880	CLOSED	YEARLONG	No Action	ISS / Impassable
10223	PUMP STATION SIX	0.700	CLOSED	YEARLONG	Decommission	ISS / Impassable
10609	NO-SEE-EM POINT	0.790	CLOSED	YEARLONG	No Action	ISS / Impassable
10610	MAUZEY CREEK	0.450	CLOSED	YEARLONG	No Action	ISS / Impassable
10612	GLEN PARKER	1.090	CLOSED	YEARLONG	Decommission	ISS / Impassable
10614	ESTES LAKE	0.080	OPEN	04/01 THRU 11/30	No Action	ISS / Impassable
10617	GUNDERSON POINT	2.060	CLOSED	YEARLONG	Decommission	Closed Yearlong Gate
10618	MISSION WELL	0.610	CLOSED	YEARLONG	Decommission	Decommission
10626	NORTH FORK PARKER	1.950	CLOSED	YEARLONG	Decommission	ISS / Impassable
10633	LOW ROSEWATER	0.100	CLOSED	YEARLONG	No Action	Decommission
1028A	FLATHEAD LAKE CAMP A	0.080	CLOSED	YEARLONG	No Action	No Action
498A	CRANE OVERLOOK	0.500	CLOSED	YEARLONG	No Action	ISS / Impassable
498B	HUNGER STUB	0.460	CLOSED	YEARLONG	No Action	Decommission
498X	MISSION DIVIDE X	0.300	CLOSED	YEARLONG	No Action	Decommission
498Y	MISSION DIVIDE Y	0.060	CLOSED	YEARLONG	Decommission	ISS / Impassable
9704Z	WOODS BAY Z	0.100	CLOSED	YEARLONG	Decommission	Decommission
9705A	SOUTH LODGEPOLE LANE	.750	CLOSED	YEARLONG	No Action	ISS / Impassable
9716B	STOPHER GOFOR	0.701	CLOSED	YEARLONG	No Action	ISS / Impassable
9716B	STOPHER GOFOR	0.119	CLOSED	YEARLONG	No Action	Decommission
9732A	BUG TAKEOFF A	0.540	CLOSED	YEARLONG	No Action	No Action

NFSR Road No.	Name	Miles	Current Travel Management Strategy		1996 Crane Decision Travel Management Strategy	Bug Creek Proposed Travel Management Strategy
			Designation	Dates		
9754A	LOW CRANE TOP	1.700	CLOSED	YEARLONG	Decommission	Closed Yearlong Berm
9765A	PORCUPINE STUB	0.940	CLOSED	YEARLONG	Decommission	ISS / Impassable
9885A	PARKER PARK	2.130	CLOSED	YEARLONG	Decommission	ISS / Impassable

APPENDIX B - VEGETATION TREATMENT ACTIVITIES BEING PROPOSED BY UNIT

Unit No.	Acres	Treatment Activity	Fuels	Method	Slash Treatment
1	7	Understory Removal	Chip/Lop Scatter	Mechanical	--
3	37	Seedtree	Burn Piles	Tractor	Slash/Pile
3A	9	Seedtree	Broadcast Burn	Skyline	Slash/Pile
4	9	Seedtree	Burn Piles	Tractor	Slash/Pile
5	8	Seedtree	Burn Landing Piles	Tractor	Whole Tree Yard
6	10	Seedtree	Burn Landing Piles	Tractor	Whole Tree Yard
7	9	Seedtree	Broadcast Burn/Burn Landing Piles	Tractor	Whole Tree Yard /Slash
8	28	Seedtree	Burn Piles	Tractor	Whole Tree Yard /Slash/Pile
9	15	Seedtree	Burn Piles	Tractor	Whole Tree Yard /Slash/Pile
10	25	Clearcut	Broadcast Burn	Cut to Length	Lop Scatter
11	15	Seedtree	Burn Piles	Tractor	Whole Tree Yard /Pile
12	24	Clearcut	Burn Piles	Tractor	Slash/Pile
13	5	Seedtree	Broadcast Burn/Burn Landing Piles	Skyline	Whole Tree Yard /Slash
14A	3	Commercial Thin	Burn Pile	Tractor	Whole Tree Yard /Slash/Pile
14B	3	Commercial Thin	Burn Pile	Tractor	Whole Tree Yard /Slash/Pile
15	4	Seedtree	Burn Piles	Tractor	Slash/Pile
16	10	Clearcut	Burn Piles	Tractor/ Cut to Length	Slash/Pile
17	3	Clearcut	Burn Piles	Tractor	Slash/Pile
18	33	Clearcut	Broadcast Burn/Burn Landing Piles	Tractor/ Cut to Length	Whole Tree Yard /Slash
19	27	Seedtree	Burn Piles	Tractor	Slash/Pile
20	6	Commercial Thin	Chip/Pile/Burn Pile	Tractor/ Cut to Length	Whole Tree Yard
21	43	Commercial Thin	Chip/Pile/Burn Pile	Tractor	Whole Tree Yard

Unit No.	Acres	Treatment Activity	Fuels	Method	Slash Treatment
22	17	Seedtree	Broadcast Burn/Burn Landing Piles	Tractor	Slash
23	26	Seedtree	Burn Landing Piles	Tractor	Whole Tree Yard /Slash
24	11	Seedtree	Burn Landing Piles	Tractor	Whole Tree Yard
25	26	Clearcut	Broadcast Burn/Burn Landing Piles	Tractor	Whole Tree Yard /Slash
26	49	Seedtree	Broadcast Burn/Burn Landing Piles/Slash	Tractor	Whole Tree Yard
27	24	Clearcut	Burn Landing Piles	Tractor	Whole Tree Yard
28	38	Commercial Thin	Chip/Pile/Burn Pile	Tractor	Whole Tree Yard
29	9	Seedtree	Burn Piles	Tractor	Slash/Pile
30	23	Clearcut	Burn Piles	Tractor	Slash/Pile
31	9	Seedtree	Burn Piles	Tractor	Slash/Pile
32	6	Commercial Thin	Chip/BLP	Tractor	Whole Tree Yard
33	11	Seedtree	Burn Piles	Tractor	Slash/Pile
34	6	Seedtree	Burn Piles	Tractor/ Cut to Length	Slash/Pile
35	7	Seedtree	Burn Piles	Tractor	Slash/Pile
36	22	Seedtree	Chip/PN/BP	Tractor	Whole Tree Yard
37	123	Commercial Thin	SL/Chip/PN/BP	Tractor	Whole Tree Yard
38	9	Commercial Thin	Burn Landing Pile	Skyline	Whole Tree Yard
39	2	Understory Removal	Chip/Pile/Burn Pile	Mechanical	--
41	5	Understory Removal	Chip/Pile/Burn Pile	Mechanical	--
43	28	Seedtree	Broadcast Burn/Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard /Slash
43A	10	Seedtree	Broadcast Burn/Burn Landing Pile	Skyline	Whole Tree Yard /Slash
44	10	Seedtree	Broadcast Burn	Cut to Length	Lop/Scatter
45	39	Seedtree	Broadcast Burn/Burn Landing Pile	Tractor	Whole Tree Yard /Slash
47	31	Commercial Thin	SL/Chip/PN/BP	Tractor	Whole Tree Yard

Unit No.	Acres	Treatment Activity	Fuels	Method	Slash Treatment
47A	4	Commercial Thin	SL/Chip/PN/BP	Tractor	Whole Tree Yard
47B	7	Seedtree	SL/Chip/PN/BP	Tractor	Whole Tree Yard
47C	4	Seedtree	SL/Chip/PN/BP	Tractor	Whole Tree Yard
48	11	Clearcut	Burn Piles	Tractor	Slash/Pile
49	56	Commercial Thin	Burn Landing Pile	Tractor	Whole Tree Yard
50	20	Commercial Thin	Burn Landing Pile	Tractor	Whole Tree Yard
51	61	Commercial Thin	Burn Landing Pile	Tractor	Whole Tree Yard
52	19	Commercial Thin	Burn Landing Pile	Tractor	Whole Tree Yard
53	7	Commercial Thin	Burn Landing Pile	Skyline	Whole Tree Yard
55	5	Commercial Thin	Burn Landing Pile	Tractor	Whole Tree Yard
55A	92	Commercial Thin	Burn Landing Pile	Tractor	Whole Tree Yard
57	34	Seedtree	Burn Landing Pile	Skyline	Whole Tree Yard / Yarding Un- merchantable
58	15	Seedtree	Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard / Yarding Un- merchantable
58	6	Seedtree	Burn Landing Pile	Skyline	Whole Tree Yard / Yarding Un- merchantable
59	14	Clearcut	Burn Piles	Tractor	Slash/Pile
60	7	Seedtree	Burn Landing Pile	Tractor	Whole Tree Yard
61	9	Seedtree	Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard / Yarding Un- merchantable
62	15	Clearcut	Broadcast Burn	Cut to Length	Lop/Scatter
63	19	Seedtree	Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard / Yarding Un- merchantable
64	32	Seedtree	Burn Landing Pile	Tractor	Whole Tree Yard
65	12	Clearcut	Burn Piles	Tractor	Slash/Pile
66	23	Clearcut	Burn Piles	Tractor	Slash/Pile
69	24	Commercial Thin	Burn Piles	Tractor	Slash/Pile
70	16	Commercial Thin	Burn Landing Pile	Skyline	Whole Tree Yard / Slash
73	11	Clearcut	Burn Piles	Tractor	Slash/Pile

Unit No.	Acres	Treatment Activity	Fuels	Method	Slash Treatment
74	7	Clearcut	Broadcast Burn/Burn Landing Pile	Skyline	Whole Tree Yard / Slash
75	14	Clearcut	Burn Piles	Tractor	Slash/Pile
76	9	Clearcut	Burn Piles	Tractor	Slash/Pile
77	11	Clearcut	Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard / Slash
78	19	Clearcut	Burn Piles	Tractor	Slash/Pile
79	3	Seedtree	Burn Piles	Tractor	Slash/Pile
80	8	Seedtree	Broadcast Burn/Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard / Slash
81	14	Clearcut	Burn Piles	Tractor	Slash/Pile
82	17	Seedtree	Burn Piles	Tractor	Slash/Pile
83	7	Seedtree	Broadcast Burn/Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard / Slash
84	17	Seedtree	Burn Landing Pile	Tractor	Whole Tree Yard
85	17	Seedtree	Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard
86	38	Seedtree	Broadcast Burn/Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard / Slash
88	40	Shelterwood	SL/ Burn Landing Pile	Tractor	Whole Tree Yard / Slash
89	14	Commercial Thin	Burn Landing Pile	Tractor	Whole Tree Yard
93	18	Seedtree	Broadcast Burn/Burn Landing Pile	Skyline	Whole Tree Yard / Slash
94	26	Clearcut	Broadcast Burn/Burn Landing Pile	Tractor	Whole Tree Yard / Slash
95	15	Clearcut	Broadcast Burn/Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard / Slash
96	18	Clearcut	Broadcast Burn/Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard / Slash
97	41	Seedtree	Burn Landing Pile	Tractor	Whole Tree Yard / Slash

Unit No.	Acres	Treatment Activity	Fuels	Method	Slash Treatment
98	9	Seedtree	Burn Landing Pile	Tractor/ Cut to Length	Whole Tree Yard
101	29	Seedtree	Burn Piles	Tractor/ Cut to Length	Slash/Pile
102	39	Seedtree	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
103	17	Seedtree	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
104	24	Seedtree	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
105	18	Seedtree	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
106	17	Commercial Thin	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
107	12	Commercial Thin	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
108	4	Commercial Thin	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
109	23	Commercial Thin	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
111	5	Clearcut	Burn Piles	Skyline	Whole Tree Yard / Slash/Pile
112	7	Clearcut	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
113	10	Clearcut	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
114	10	Clearcut	Burn Piles	Skyline	Whole Tree Yard / Slash/Pile
115	86	Commercial Thin	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
116	68	Seedtree	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
117	72	Commercial Thin	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
119	8	Commercial Thin	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile

Unit No.	Acres	Treatment Activity	Fuels	Method	Slash Treatment
120	4	Seedtree	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
121	9	Seedtree	Burn Piles	Skyline	Slash
122	10	Commercial Thin	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
123A	4	Seedtree	Burn Piles	Skyline	Slash
123B	4	Seedtree	Burn Piles	Skyline	Slash
123C	2	Seedtree	Burn Piles	Skyline	Slash
130	18	Seedtree	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
131	26	Commercial Thin	Burn Piles	Skyline	Slash
132	28	Seedtree	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
133	5	Seedtree	Burn Piles	Skyline	Whole Tree Yard / Slash/Pile
134	20	Commercial Thin	Burn Piles	Skyline	Slash
135	4	Commercial Thin	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
136	30	Seedtree	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
137	13	Commercial Thin	Burn Piles	Skyline	Slash
138	4	Commercial Thin	Burn Piles	Skyline	Slash
139	18	Commercial Thin	Burn Piles	Skyline	Slash
140	22	Seedtree	Broadcast Burn/Burn Landing Pile	Skyline	Slash
141	2	Seedtree	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
142	23	Seedtree	Burn Piles	Skyline	Slash
143	22	Seedtree	Burn Piles	Skyline	Slash
144	8	Seedtree	Burn Piles	Tractor/ Cut to Length	Whole Tree Yard / Slash/Pile
145	5	Seedtree	Burn Piles	Skyline	Whole Tree Yard / Slash/Pile
201	5	Pre-commercial Thin	Lop/Scatter	Mechanical	--
202	5	Pre-commercial Thin	Lop/Scatter	Mechanical	--

Unit No.	Acres	Treatment Activity	Fuels	Method	Slash Treatment
203	5	Pre-commercial Thin	Lop/Scatter	Mechanical	--
204	6	Pre-commercial Thin	Lop/Scatter	Mechanical	--
205	28	Pre-commercial Thin	Lop/Scatter	Mechanical	--
206	12	Pre-commercial Thin	Lop/Scatter	Mechanical	--
207	8	Pre-commercial Thin	Lop/Scatter	Mechanical	--
208A	3	Pre-commercial Thin	Lop/Scatter	Mechanical	--
208B	2	Daylight Pruning	Lop/Scatter	Hand	--
209	5	Pre-commercial Thin	Lop/Scatter	Hand	Slash/Chip
210	3	Pre-commercial Thin	Lop/Scatter	Mechanical	--
210A	3	Daylight Pruning	Lop/Scatter	Hand	--
211	33	Girdle/ Pre-commercial Thin	Lop/Scatter	Mechanical	--
212	156	Pre-commercial Thin	Lop/Scatter	Mechanical	--
213	186	Girdle/ Pre-commercial Thin	Lop/Scatter	Mechanical	--
214	29	Pre-commercial Thin	Lop/Scatter	Mechanical	--
215	10	Pre-commercial Thin	Lop/Scatter	Mechanical	--
216	4	Pre-commercial Thin	Lop/Scatter	Mechanical	--
217	13	Pre-commercial Thin	Lop/Scatter	Mechanical	--
218	77	Pre-commercial Thin	Lop/Scatter	Mechanical	--
219	10	Pre-commercial Thin	Lop/Scatter	Hand	--
221	10	Girdle/ Pre-commercial Thin	Lop/Scatter	Mechanical	--
222	19	Pre-commercial Thin	Lop/Scatter	Hand	--
223	4	Pre-commercial Thin	Lop/Scatter	Mechanical	--
224	6	Pre-commercial Thin	Lop/Scatter	Mechanical	--
224A	2	Pre-commercial Thin	Lop/Scatter	Mechanical	--
225A	41	Pre-commercial Thin	Lop/Scatter	Mechanical	--
225B	43	Pre-commercial Thin	Lop/Scatter	Mechanical	--
226	26	Pre-commercial Thin	Lop/Scatter	Hand	--
227	20	Girdle/ Pre-commercial Thin	Lop/Scatter	Mechanical	--
228	21	Girdle/ Pre-commercial Thin	Lop/Scatter	Mechanical	--

Unit No.	Acres	Treatment Activity	Fuels	Method	Slash Treatment
229	6	Pre-commercial Thin /Prune	Lop/Scatter	Mechanical	--
230	16	Pre-commercial Thin	Lop/Scatter	Mechanical	--
231	4	Pre-commercial Thin	Lop/Scatter	Hand	--
232	6	Pre-commercial Thin	Lop/Scatter	Mechanical	--
233	4	Pre-commercial Thin	Lop/Scatter	Hand	--
234	5	Pre-commercial Thin	Lop/Scatter	Mechanical	--
235	12	Girdle/ Pre-commercial Thin	Lop/Scatter	Mechanical	--
236	11	Pre-commercial Thin	Lop/Scatter	Mechanical	--
237	12	Pre-commercial Thin	Lop/Scatter	Hand	--
238	11	Pre-commercial Thin	Lop/Scatter	Mechanical	--
239	17	Pre-commercial Thin	Lop/Scatter	Mechanical	--
240	15	Pre-commercial Thin	Lop/Scatter	Hand	--
241	17	Pre-commercial Thin	Lop/Scatter	Hand	--
242	27	Pre-commercial Thin	Lop/Scatter	Hand	--
243	3	Pre-commercial Thin	Lop/Scatter	Hand	--
243A	4	Daylight Pruning	Lop/Scatter	Hand	--
244	44	Daylight Pruning	Lop/Scatter	Mechanical	--
250	34	Understory Removal	Lop/Scatter	Mechanical	Slash/Chip
251	27	Understory Removal	Burn Pile	Hand	Whole Tree Yard / Slash/Pile
252	28	Slash	Lop/Scatter	Mechanical	--
253	40	Understory Removal	Burn Landing Piles	Tractor	Grapple Pile
300	29	Burn	Broadcast Burn	--	--
301	375	Burn	Broadcast Burn	--	--
302	9	Burn	Broadcast Burn	--	--
303	62	Burn	Broadcast Burn	--	--
304	83	Burn	Broadcast Burn	--	--
305	26	Burn	Broadcast Burn	--	--
306	18	Burn	Broadcast Burn	--	--
307	66	Burn	Broadcast Burn	--	--
308	460	Burn	Broadcast Burn	--	--
309	384	Burn	Broadcast Burn	--	--

