Decision Notice & Finding of No Significant Impact

TEE TIMBER SALE

USDA Forest Service

Mount St. Helens National Volcanic Monument,
Gifford Pinchot National Forest
Skamania County, Washington
T. 4 N., R. 5 E., Willamette Meridian

Decision and Reasons for the Decision

Background

The Mount St. Helens National Volcanic Monument (MSHNVM) proposed a timber sale in 2005 in the Tee Timber Sale planning area, within the East Fork Lewis River 5th-field watershed. The primary purpose of the proposed project is to restore and accelerate the timber growth and yield of even-aged, stagnated stands within fire-regenerated areas. Actions associated with this project include harvesting of timber, construction of temporary roads and helicopter landings, reconstruction of permanent roads, treatment of logging slash, underplanting, and road decommissioning following project activities.

The environmental analysis (EA) for this project was completed in May 2006 and identified resource needs (EA, page 2) and management objectives (EA, pages 2 to 5) for this project that are intended to move the area closer toward the desired future conditions of the landscape, as identified in the *Gifford Pinchot National Forest Land and Resource Management Plan* (LRMP), as amended, and actions recommended in the *East Fork Lewis River Watershed Analysis* identified as necessary to attain the Aquatic Conservation Strategy objectives at the 5th field watershed scale.

The Tee Timber Sale planning area is located about seven miles east of the MSHNVM Headquarters (Amboy, Washington). The Tee Timber Sale planning area is in the East Fork Lewis River drainages, and includes approximately 12,000 acres.

The environmental assessment documents the analysis of three (3) alternatives to meet this need and the no action alternative.

Decision

Based upon my review of all alternatives, I have decided to implement Alternative A, the proposed action, with modifications. Instead of constructing approximately 10,280 feet of temporary road, Unit 47 will be converted to a helicopter logging system so that temporary road is no longer needed to access this unit. This will reduce the amount of road construction by approximately 4,200 feet. In addition, I have decided to implement all road decommissioning, as described in Alternative B.

Implementation of this alternative will result in the harvest of about 10.5 MMF (million board feet) of timber from 41 commercial thinning harvest units totaling approximately 1,065 acres using a combination of helicopter, skyline, and tractor logging systems. Upland stands will be thinned to a minimum of 40 percent canopy retention (averaging 40 to 50 percent). Approximately 67 acres of these acres of thinning will be within riparian areas. Riparian thinning will be thinned to an average canopy retention of 50 to 60 percent. In addition, approximately 15 acres will be pre-commercially thinned. To provide access for the harvest activities approximately 6,080 feet of temporary roads and 14 helicopter landings (approximately one acre, each) will be constructed. Following timber harvest, logging slash will be disposed of by lop and scatter or hand piling and burning. The thinned riparian areas will be underplanted and temporary

roads will be removed following post-sale activities (slash treatment and planting) and approximately 9.7 miles of existing system roads will be decommissioned.

This decision includes all of the project design criteria as listed in the EA (Appendix A) and in and mitigation measures described on pages 24 and 25 of the EA. Additional project design criteria have been added as a result of public comment. The project design criteria and mitigation measures can be found in Attachment 1 of this Decision Notice.

Tables 1 through 4 and Figure 1 summarize the activities to be implemented in the Tee Timber Sale:

Table 1. Detail of Selected Alternative – Commercial thinning prescription, logging system and slash treatment prescription by unit.

Unit #	Total Acres	Upland Acres Thinned	Riparian Acres Thinned	Logging System	Slash Treatment
1	32	32	0	Skyline	HP 75' along FR 4104 (2.0 ac). MP landings (0.3 ac).
2	20	20	0	Helicopter	Lop/Scatter
4	28	28	0	Helicopter	Lop/Scatter
5	11	11	N/A	Tractor	MP 10 ac.
6	23	20	3	Helicopter	Lop/Scatter
7	10	10	0	Helicopter	Lop/Scatter
8	57	57	0	Helicopter	Lop/Scatter
9	32	32	0	Helicopter	Lop/Scatter
10	3	3	0	Helicopter	Lop/Scatter
11	14	14	0	Helicopter	Lop/Scatter
16	38	38	0	Helicopter	Lop/Scatter
18	22	17	5	Helicopter	HP 75' on both sides of FR 4104 (1.5 ac). MP landings (0.2 ac).
19	32	24	8	Skyline/ Helicopter	HP 75' on east side of FR 4104 (2.75 ac). MP landings (0.4 ac).
20	28	28	N/A	Helicopter	Lop/Scatter
21	16	16	0	Helicopter	Lop/Scatter
22	16	16	N/A	Tractor	MP 9 ac.
23/24	14	14	N/A	Helicopter	HP 75' on both sides of FR 4211-538 (1.5 ac).
25	35	35	0	Helicopter	Lop/Scatter
26	48	43	5	Skyline	HP 75' along FR 4205-523 (1.5 ac).
27	7	6	1	Helicopter	HP 75' along FR 4211-538 (1 ac.)
28	51	37	14	Helicopter	Lop/Scatter
29	41	41	0	Tractor	HP both sides of FR 4205 (5 ac). MP 30 ac.
30	25	25	0	Helicopter	Lop/Scatter
31	56	49	7	Helicopter	Lop/Scatter
32	27	24	3	Helicopter	HP 75' on north side of FR 41 (1.25 ac).
35	14	12	2	Skyline	Lop/Scatter
36/42	23	22	1	Skyline	HP 12 ac. MP landings
37/38/	20	16	4	Tractor	MP 7 ac.

Unit #	Total Acres	Upland Acres Thinned	Riparian Acres Thinned	Logging System	Slash Treatment	
39						
40	19	19	N/A	Tractor	HP 75' on both sides of the FR 4104 (3.0 ac). MP landings (0.3 ac).	
43	20	20	0	Helicopter	HP 50' in spots along the TR173 (1.0 ac). MP landings (0.3 ac).	
44	77	63	14	Tractor	HP 50' in spots along the TR173 (1.0 ac). MP landings (0.3 ac).	
45	40	40	0	Helicopter	Lop/Scatter	
46	39	39	N/A	Helicopter	Lop/Scatter	
47	49	49	0	Helicopter	Lop/Scatter	
48	28	28	0	Helicopter	Lop/Scatter	
49	18	18	0	Helicopter	Lop/Scatter	
50	32	32	0	Helicopter	Lop/Scatter	
Total	1,065 ac.	998 ac.	67 ac.		21.5 ac. HP 70.9 ac. MP	

Legend:

HP = Handpile

MP = Machine Pile w/ grapple piler

Table 2. Selected Alternative – Temporary road construction.

Unit	Approx. Length (feet)
26	2,000
44	1,680
Helicopter landings F and G	2,400
Total	6,080 feet

Table 3. Selected Alternative – Alternative A: helicopter landing sites to be constructed.

Helicopter Site #	Location	Size	Slash Treatment
Α	FR 4205524 (North of Unit 47)	1 acre	MP
В	Un-named spur rd off the FR 4205 (SW ¼ of the SE ¼ of Section 7)	1 acre	MP
С	End of the FR 4211538.	1 acre	MP
D	FR 4205 (0.3 mile south of FR 4205524 jct)	1 acre	MP
E	FR 4211541/FR 4211539-jct.	1 acre	MP
F	Temp. road off FR 53 (SE ¼ of the NW ¼ of Section 11)	1 acre	MP
G	Temp. road off the FR 53 (SE ¼ of the SW ¼ of Section 11)	1 acre	MP

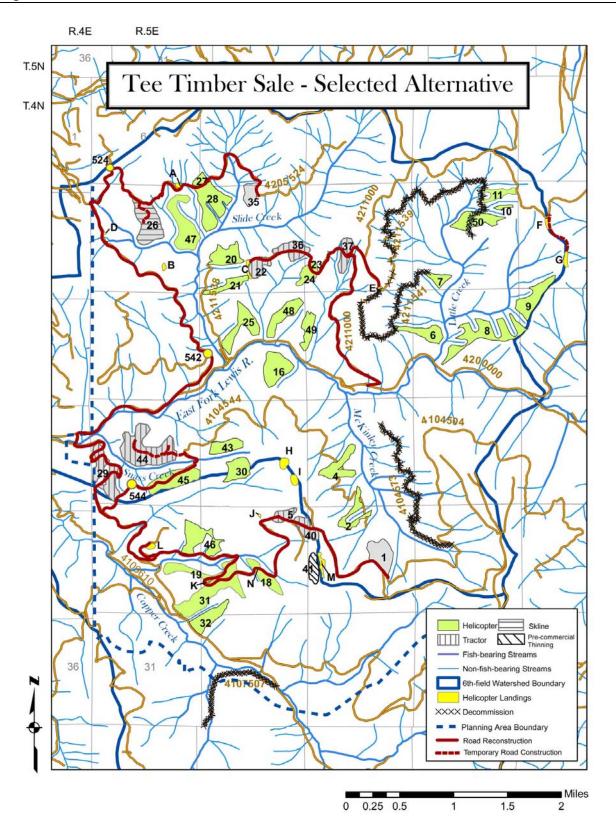
Н	Temp. road off the end of FR 4104602	1 acre	MP
I	Temp. road off the end of FR4104602	1 acre	MP
J	West of Unit 5	1 acre	MP
K	FR 4104 (switchback NE ¼ of the SW ¼ Sec. 29)	1 acre	MP
L	FR 4104571 (SW ¼ of the NE ¼ Sec. 30)	1 acre	MP
М	Un-named spur into Unit 41 (NW ¼ of the SW ¼ Section 28)	1 acre	MP
N	FR 4104 within Unit 18	1 acre	MP
Total		14 acres	14 acres

Table 4. Selected Alternative – Road decommissioning.

Unit	Approx. Length (miles)
FR 4107507	1.1 miles
FR 4104573	1.9 miles
FR 4211539	3.7 miles
FR 4211541	1.8 miles
FR 4207 (remove culverts; already partially decommissioned)	1.2 miles
Total	9.7 miles

Fifteen acres of pre-commercial thinning would also occur under this alternative (Unit 41). Slash treatment would be lop and scatter.

Figure 1. Selected Alternative.



When compared to the other alternatives this alternative, as modified, meets the purpose of and need for action and provides addresses some of the road-related effects. This alternative meets requirements under *Gifford Pinchot National Forest Land and Resource Management Plan* as amended and recommendations found in the *East Fork Lewis River Watershed Analysis*, and the *Gifford Pinchot National Forest Roads Analysis*.

Rationale for the Decision

Alternative A, as modified, will economically thin approximately 1,080 acres of even-aged stands within the matrix allocation to yield approximately 10.5 MMBF. Thinning approximately 998 acres of upland stands will achieve the objective for accelerating growth for the continued production and utilization of forest resources within the matrix allocation. Thinning approximately 67 acres of riparian stands is expected to accelerate the development of larger trees and increase structural and species diversity (EA, pages 45 and 46).

As modified, Alternative A will address the significant issues. Logging Unit 47 (approximately 49 acres) using a helicopter logging systems instead of ground-based systems will indirectly reduce the amount of road-generated sediment. To further reduce road-generated sediment, road construction, reconstruction and log haul is limited to the dry season, as defined in Mitigation Measure H.3 and the amount of road reconstruction will be reduced by approximately 4,200' (EA, pages 62 to 67). As modified, this action is expected to offset some long-term watershed effects by decommissioning approximately 8.5 miles of road within the project area which would decrease road density within the Upper East Fork and Copper Creek subwatersheds from approximately 5.8 miles per square mile (mi./sq. mi) to approximately 5.2 mi./sq. mi. (EA, page 48) and the drainage density from 11.8 mi./sq. mi. to 11.4 mi./sq. mi. (EA, page 50). The roads that will be decommissioned are mid-slope, steep gradient roads that are prone to failure and are redundant to access, or roads that enter the Silver Star Inventoried Roadless Area (LRMP Management Area SD).

Other Alternatives Considered

In addition to the selected alternative, I considered three other alternatives, including the No Action alternative. A comparison of these alternatives can be found in the EA on pages 24 and 25.

Alternative B

Alternative B was not selected because fewer acres are thinned (901acres compared to 1,080 acres in the selected alternative) to accelerate growth and the development of late-successional conditions, with little difference in sediment production. Units 6, 8, and 25 would not be thinned, nor would thinning occur in any of the Riparian Reserves. This would not meet project objectives for accelerating growth and improving stand structure distribution and accelerating late-successional conditions in Riparian Reserves. Changing logging systems to favor skyline systems over tractor logging and helicopter logging over skyline/ground-based systems would increase cost, making this alternative the least cost-effective alternative, even when compared to a modified Alternative A (including the additional costs associated road decommissioning and converting Unit 47 to helicopter logging) (EA, pages 125 to 127). When compared to Alternative A, modification of the logging systems would not affect the indicators for either of the significant issues. More resource benefits would be achieved from reduction in road-related actions and from road decommissioning. As noted above, the selected action includes a 40% reduction in temporary road construction and adoption of road decommissioning proposed in Alternative B.

Alternative C

Even though sediment production would be reduced as a result of helicopter logging, no temporary road construction and fewer miles of road reconstruction, Alternative C was not selected because the

current market for small timber is estimated to result in poor economic returns given the high cost of helicopter yarding in these thinning units when combined with the current low value for small diameter trees. The higher cost of helicopter logging is partly offset by fewer miles of road reconstruction. Alternative C is therefore slightly more cost effective than Alternative B. Alternative C would deliver comparatively less sediment over the short term, however this alternative lacks the long-term benefits to the watershed from reduction in road density and drainage density from road decommissioning. Modifying Alternative D to add road decommissioning actions would make the resulting project even less cost effective.

Alternative D – No Action

Under the No Action alternative, current management plans would continue to guide management of the project area. Alternative D was not selected because matrix stand growth and the development of late-successional characteristics in Riparian Reserve stands proposed for thinning would take place over a longer period of time and at an unpredictable degree and rate of change. This would not meet project objectives for improving stand structure distribution and accelerating late-successional conditions in Riparian Reserves.

Public Involvement

As described in the background, this project was initiated in 2005 and was first listed in the April 2005 Schedule of Proposed Actions. An initial scoping letter, dated November 21, 2005, was sent to interested individuals, groups, and agencies. The scoping letters for this project were also sent to the Cowlitz Indian office and the Yakama Indian Nation. This letter was followed by a field trip with members of the Gifford Pinchot Task Force and Susan Jane Brown, Esq. on September 26, 2005. Copies of scoping notices and comment letters are in the analysis file.

During the initial scoping period, the Forest Service received two comment letters in response to the proposed action (EA, page 6).

Using the comments from the public, the interdisciplinary team identified several issues regarding the effects of the proposed action. Two significant issues were identified:

- Issue 1 Cumulative watershed effects (EA, page 7).
- Issue 2 Sediment generation and damage to thin, erosive soils (EA, page 8).

To address these concerns, the Forest Service created Alternatives B and C, as described above.

A legal notice announcing the availability of the Tee Timber Sale Environmental Assessment for review and comment was published in the *Columbian* newspaper (newspaper of record) on May 3, 2006. The 30-day comment period ended on June 5, 2006. Four individuals and organizations submitted written comments within the comment period. Copies of these letters are in the Tee Timber Sale analysis file. Substantive comments received are summarized along with Forest Service responses in Appendix 2 of this document. I have considered these comments when making the decision to implement a modified Alternative A.

Some commenters recommended changes or additions to the Project Design Criteria (Attachment 1). The following are adopted:

■ The need and location for additional uncut buffers designed primarily to preserve legacy features in each stand was negotiated. Stream buffers, and buffers for Sensitive plants and Survey and Manage species were already taken into account in the project design and documented in the Project Design Criteria (EA Appendix A). Additional buffers are described in Attachment 1.

- A 50-60% canopy cover will be retained in Unit 4 in areas with potentially unstable soils.
- Harvest will be limited to trees with diameters less than 30".

Finding of No Significant Impact

After considering the environmental effects described in the EA, I have determined that these actions will not have a significant affect on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. I base by finding on the following:

- 1. My finding of no significant environmental effects is not biased by the beneficial effects of the action.
- 2. I find there will be no significant affects to public health and safety. Trail #173 will be temporarily closed to the public during active logging operations in Units 29, 30, 43, and 44. (Attachment 1). Log haul will be permitted only Monday through Friday, except holidays to limit the potential for road use conflicts with recreational visitors.
- 3. I find there will be no significant affects on unique characteristics or ecologically critical areas, including historic or cultural resources, park lands, prime farmlands, rangelands, wetlands, or Wild and Scenic Rivers. There are no park lands, farmlands, or rangelands within the Tee Timber Sale planning area. There are a number of heritage resource sites located within the planning area, however the project design and mitigation were developed to ensure that these resources would be protected (EA, pages 126 and 127). There will be no impact to wetlands due to the implementation of project design criteria and mitigation measures (EA, page 133). The LRMP recognizes the potential for the segment of the East Fork Lewis River to be eligible for "Scenic" classification. The LRMP requires that these areas be managed in a manner that would maintain their eligibility for Wild and Scenic River status. Mitigation measures were developed to protect the outstandingly remarkable values of the East Fork Lewis River (EA, pages 123 and 124).
- 4. The effects on the quality of the human environment are not likely to be highly controversial. There is no known scientific controversy over the impacts of the project. The comments to the EA indicate that this project is not considered to be controversial (Analysis File, Comments to the EA).
- 5. Through implementation of similar vegetation management in the Mount St. Helens National Volcanic Monument, the Forest Service has considerable local experience with the types of activities to be implemented. Thus, I have determined that the effects analysis shows the effects are not uncertain, and do not involve unique or unknown risk (EA, pages 23 to 133).
- 6. I find that this action is one of several similar actions undertaken on national forest lands and is not likely to establish a precedent for future actions with significant effects, or represent a decision in principle.
- 7. I find that the cumulative impacts are not significant. Cumulative impacts are addressed by issue in Chapter III of the EA.
- 8. I find that the action will have no significant adverse affect on districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, because potential effects would be avioided through the application of project design criteria (EA, page I26).

9. I find the action will not adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species act of 1973. For Threatened and Endangered aquatic species, all construction activities will follow the conservation recommendations to avoid, minimize, or otherwise offset affects to aquatic resources described in the Endangered Species Act - Section 7 Informal Consultation [Endangered Species Act Section 7 Informal Consultations and Magnuson-Stevens Fishery Conservation Management Act Essential Fish Habitat Consultations for the Tee Timber Sale, Mount St. Helens National Volcanic Monument [HUCs 170800020502 Upper East Fork Lewis and 170800020503 Copper Creek...], June 29, 2006). National Marine Fisheries Service concurred with the determination that the project may affect, but is not likely to adversely affect Lower Columbia River steelhead, and Designated Critical Habitat for steelhead.

US Fish and Wildlife Service concurred with the determination that this project: *may affect, but is not likely to adversely affect* northern spotted owls and will *not effect* gray wolf, grizzly bear, peregrine falcon, spotted owl critical habitat and bald eagle. (USFWS Letter of Concurrence 1-3-06-I-0270, 5/26/2006) (EA pages 93 to 96).

10. I find that the action will not violate Federal, State, and local laws or requirements for the protection of the environment. Applicable laws and regulations were considered in the EA (EA, pages 131 to 132). The action is consistent with the *Gifford Pinchot National Forest Land and Resource Management Plan* as amended.

Findings Required by Other Laws and Regulations

As required by the National Forest Management Act, this decision is tiered to the Gifford Pinchot National Forest Land and Resource Management Plan (1990) as amended by the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (1994), Amendments to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (2001), Amending Resource Management Plans for Seven Bureau of Land Management Districts and Land and Resource Management Plans for Nineteen National Forests Within the Range of the Northern Spotted Owl - Decision to Clarify Provisions Relating to the Aquatic Conservation Strategy (2004), and To Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (2004). I find that the only irreversible or irretrievable commitment of resources will be use of rock for road surfacing and the small loss of soil productivity (about 1%) (EA, page 131). All landings are temporary and will be subsoiled and reseeded upon completion of the project.

This decision is based on the following additional factors to assure consistency with the National Forest Management Act of 1976:

This action is best suited to the goals in the LRMP. The applicable goals with respect to the LRMP and the East Fork Lewis River Watershed Analysis are stated in the EA on pages 2 to 3. This decision is responsive to those goals and is best suited to meet those goals.

Lands can be adequately restocked within five years after final harvest when trees are cut to achieve timber production.

Restocking is not applicable; the area treated will remain fully stocked after treatment as described in the silvicultural prescription. All treatments are commercial or pre-commercial thinning (see Table I, above).

This decision is not based on the greatest dollar return or the greatest output of timber (although these factors shall be considered). This decision was based on a variety of reasons. It was not primarily chosen for its expected economic benefit (EA, pages 126 to 130). Economics was only one of the many factors considered.

Potential effects on residual trees and adjacent stands have been considered. The effects on residual trees and adjacent stands were considered in development of the LRMP. The decision, including adherence to applicable LRMP Standards and Guidelines and the Project Design Criteria, is designed to provide the desired effects of management practices on the resource values. This decision is consistent with the LRMP and provides the desired effect on residual trees and adjacent stands.

This action was selected to avoid permanent impairment of site productivity and to ensure conservation of soil and water resources. This decision avoids impairment of site productivity. The nature of the decision and use of Best Management Practices, Project Design Criteria, and the Mitigation Measures will protect soil and water resources.

This action was selected to provide the desired effects on water quality and quantity, wildlife and fish habitat, regeneration of desired tree species, forage production, recreation users, aesthetic values, and other resource yields. The decision, including adherence to applicable LRMP Standards and Guidelines, Best Management Practices, Project Design Criteria, and the Mitigation Measures is designed to provide the desired effects of management practices on the resource values. This decision is consistent with the LRMP and provides the desired effect on the above resources.

This action is practical in terms of transportation and harvesting requirements and total costs of preparation, logging, and administration. The project area has adequate access, no new permanent roads are necessary to implement this decision. The treatment in this decision is appropriate to accomplish project objectives, and is economically practical. The benefit-to-cost ratio is positive, considering the cost of harvest operations, design criteria, and mitigation. The return is sufficient to cover the cost of contract preparation and sale administration.

I find that this action is consistent with the *Record of Decision for the Final Environmental Impact Statement for Managing Competing and Unwanted Vegetation* (USDA, 1988b) as amended by the *Amendment to the 1988 Record of Decision for the Final Environmental Impact Statement for Managing Competing and Unwanted Vegetation* (USDA, 1992), further supplemented by the Mediated Agreement. Specific mitigation is included by this decision to prevent or control the spread of noxious weeds within the project area and along roads.

I find that this action is consistent with the Sustainable Fisheries Act of 1996 (Public Law 104-267) (which amended the Magnuson-Stevens Fishery Conservation and Management Act). Because Essential Fish Habitat will not be adversely affected for any of these species, no consultation is necessary.

I find that all applicable state and federal requirements associated with the Clean Water Act (CWA) will be met through planning, application, and monitoring of Best Management Practices in conformance with the CWA and Federal guidance and management direction.

I find that this action does not violate other Federal, State, or local laws designed for the protection of the environment.

Administrative Review or Appeal Opportunities

This decision is subject to administrative review (appeal) pursuant to 36 CFR Part 215 (revised, June 2004). The written appeal must be filed (regular mail, fax, email, hand-delivery, or express delivery) with the Appeal Deciding Officer at:

Gifford Pinchot National Forest Claire Lavendel, Appeal Deciding Officer, 10600 N.E. 51st Circle, Vancouver, WA 98682

FAX (360) 891-5045

email: appeals-pacificnorthwest-giffordpinchot@fs.fed.us.

The office business hours for those submitting hand-delivered appeals are: 8:00 AM to 4:30 PM Monday through Friday, excluding federal holidays. Electronic appeals must be submitted in a format such as an email message, plain text (.txt), rich text format (.rtf), Word (.doc), or portable document format (.pdf). In cases where no identifiable name is attached to an electronic message, a verification of identity will be required. A scanned signature is one way to provide verification. E-mails submitted to email addresses other than the one listed above, or in formats other than those listed or containing viruses, will be rejected. It is the responsibility of the appellant to confirm receipt of appeals submitted by electronic mail.

Appeals, including attachments, must be filed within 45 days from the publication date of this notice in the *Columbian*, the newspaper of record. Attachments received after the 45 day appeal period will not be considered. The publication date in the *Columbian* is the exclusive means for calculating the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source.

Implementation Date

If no appeals are filed within the 45-day time period, implementation of the decision may occur on, but not before, 5 business days from the close of the appeal filing period. When appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

Contact

For additional information concerning this decision or the Forest Service appeal process, contact Cynthia Henchell, Sorth Zone Team Planner, during normal office hours (weekdays, 8:00 a.m. to 4:30 p.m.) at the Mount Adams Ranger District office (Address: Hwy 141, Trout Lake, WA 98650; Phone: voice (509) 395-3411, TDD (509) 395-3422 (hearing impaired); Fax: (509) 395-3424; e-mail: chenchell@fs.fed.us.

 /s/ Tom Mulder
 7/20/2006

 TOM MULDER
 Date

Monument Manager Mount St. Helens National Volcanic Monument

Attachment 1

Table 1. Cutting boundaries or actions that would be incorporated into the timber sale contract or post-sale plans or are legally-required to meet LRMP Standards and Guidelines or through consultation with regulatory or permitting agencies and are therefore not optional.

Project Design Criteria

A density reduction thinning prescription for the uplands would be used to space the trees and accelerate the conifer growth rate. The thinning treatment would reduce stand density to an average of 70 to 150 trees per acre.

A riparian management zone, 340 feet on each side of perennial fish bearing streams and 170 feet on each side of perennial and intermittent streams, would be designated. Density reduction activities would be permitted within portions of the management zone. Cut trees would be directionally felled away from the streams.

Fifteen acres of one 15-year old conifer plantation within the Tee Timber Sale planning area would be pre-commercially thinned to accelerate conifer growth (Unit 41). A site-adapted/structure based silvicultural prescription will be used to produce a variable spacing of the leave trees. The thinning treatment would reduce the stand density to approximately 250 trees per acre.

To create horizontal patchiness and protect legacy snags, a minimum of 10.5% of the acreage within units 26, 31, and 44 will be left in no cut-skips. Included in these skips are: existing buffered sites, no cut areas of riparian reserves, and areas with the tallest legacy snags.

Remnant legacy features (snags and large down logs) would be preserved whenever possible. In identified areas devoid of these features, snags and coarse woody debris would be created.

Units are configured and logging systems prescribed such that slopes steeper than 30 percent would be cable or helicopter yarded. Machinery would not be permitted on slopes steeper than 30 percent.

Within Riparian Reserves, hardwoods would only be cut or girdled for conifer release.

Trees felled within Riparian Reserves would be felled away from the stream, and those felled outside Riparian Reserves would be felled away from the Riparian Reserves.

Western hemlock (70%), and/or western red cedar (30%) would be planted on a 12' \times 12' spacing within the treated portions of the Riparian Reserves.

Native plant materials are the first choice in revegetation for restoration and rehabilitation where timely natural regeneration of the native plant community is not likely to occur.

Vexar® tubing with 2 stakes should be installed 24-48 hours after the planting of the western redcedar to deter animal browsing.

All re-constructed roads would be designed to control surface road drainage to minimize erosion and sedimentation. All drainage structures would be designed to accommodate the 100-year flood and associated debris.

Skyline logging would require a slack pulling carriage for lateral yarding. One-end suspension would be required, with full suspension through riparian areas.

Prior to felling, skid trails would be pre-designated and approved for all ground-based equipment operations, and spaced a minimum of 150 feet apart. Existing skid trails and roads would be used if possible rather than creating new ones.

Timber would be felled to lead to the skid trails.

All equipment would be confined to approved temporary roads, skid trails and landings during yarding operations. Skidders would remain on approved skid trails and winch logs as necessary.

To minimize the wounding (bark slough) of residual trees, restrict log skidding from April 15th to July 1st, except within units designated for helicopter logging systems. This does not apply to tree felling or slash piling activities.

Buffers, in addition to 170' or 340' Riparian Reserves:

	Design Criteria		
Unit 1	90 ft. radius buffer, centered on <i>Corydalis aquae-gelidae</i> population located adjacent to spring on the northern edge of unit. During thinning operations, timber should be directionally felled away from these reserves.		
Unit 6	The single <i>Tetraphis geniculata</i> site on the southern edge of the unit will be protected by a 120 ft. radius buffer centered on the population.		
Unit 8	90 ft. buffer centered on <i>Peltigera pacifica</i> population. During thinning operations, timber should be directionally felled away from known site, but may fall within reserve.		
Unit 16	Tetraphis geniculata on the northern side will be protected by a 75 ft. radius buffer centered on population.		
Unit 18	75 ft. Riparian Reserve adjacent to the spring, and along the stream on the western boundary of the unit up to the crossing of FR 4104, and a 75 ft. Riparian Reserve along the stream located parallel to the the eastern boundary of the unit. During thinning operations, timber should be directionally felled away from these reserves.		
Unit 19	75 ft. radius distance (centered on <i>Tetraphis geniculata</i> population) from harvest edge.		
Unit 21	Tetraphis geniculata sites will be protected through implementation of 75 or 120 ft. buffers centered on populations, where appropriate (on the ground measurement will be required to determine proximity of sites to harvest boundaries, which will determine width of buffer).		
Units 23 & 24	Tetraphis geniculata sites will be protected through implementation of 75 or 120 ft. buffers centered on populations, where appropriate (on the ground measurement will be required to determine proximity of sites to harvest boundaries, which will determine width of buffer).		
Unit 28	90 ft. buffer centered on population. During thinning operations, timber should be directionally felled away from known <i>Peltigera pacific</i> site, but may fall within reserve.		
Unit 29	50 ft. radius buffer centered on <i>Cetrelia cetrarioides</i> population. During thinning operations, timber should be directionally felled away from reserve. Maintain hardwood trees and shrubs along riparian corridor and adjacent to wetland.		
Unit 39	Distance of <i>Tetraphis geniculata</i> population from harvest boundary should be measured to ensure that a 75 ft. radius distance from harvest edge will be maintained.		
Unit 42	50 ft. radius buffer centered on <i>Cetrelia cetrarioides</i> population. During thinning operations, timber should be directionally felled away from reserve. Maintain hardwood trees and shrubs along small drainage.		
Unit 48	Sites will be protected through implementation of 75 or 120 ft. buffers centered on <i>Tetraphis geniculata</i> populations, where appropriate (on the ground measurement will be required to determine proximity of sites to harvest boundaries, which will determine width of buffer).		
Unit 50	Distance of <i>Tetraphis geniculata</i> population from harvest boundary should be measured to ensure that a 75 ft. radius distance of population from harvest edge will be maintained.		
	nation with Wildlife project design criteria, leave large woody debris within the stand, y within 300 meters of sites of <i>Tetraphis geniculata</i> – this will provide future habitat for this		
Control specified invasive plants at helicopter landings, culvert replacement sites, and along Tee			
and harve	ale access roads for 1/2 mile preceding areas of ground disturbance (i.e. staging areas, est units adjacent to roads), to 1/2 mile following area of ground disturbance, and within rvest units, as specified below:		
bagged a analysis a	ne ground disturbing phase of project implementation begins, weeds shall be hand pulled, and disposed of outside of Gifford Pinchot National Forest boundaries (unless Forest NEPA callows for alternative treatment). Hand control efforts should occur before invasive species seed for the year (May or June).		
During se	easons of project implementation weed re-occurrences along access roads shall be d as specified above.		
	eld seasons following project completion, weed re-occurrences at helicopter landings, and cess roads, shall be controlled as specified above. In addition, harvest units shall be		

Project Design Criteria

surveyed for invasive plant establishment and/or encroachment. If new invasive plant populations are located within harvested units invasive plants shall be controlled, as specified above.

Minimize road maintenance clearing zones, as much as safety regulations will allow, to maintain shady conditions that help minimize invasive plant population expansion.

During years of project implementation, conduct road brushing activities during spring-early summer, before seed heads mature, in order to prevent formation and release of viable seeds that could be dispersed along hauling corridors by vehicles, and/or when wind-borne seeds could disperse into newly harvested Units.

Treat known site of *Polygonum cuspidatum* site twice annually, starting the year prior to that in which ground-disturbing activities will occur, until population is extirpated. During project implementation, avoid passing ground-based equipment over or near the site, as small fragments of this plant can reestablish at new sites.

Cut down 4-5 holly trees that were found growing along the lower slopes of Unit 21. If additional holly trees are found within Tee Timber Sale Units during harvest, cut them down.

During the season before the ground disturbing phase of project implementation begins, and during seasons in which the project is being implemented, hand pull perennial pea from along FS Road 4205524 where it occurs, including above Unit 35 (unless NEPA analyis allows for alternative treatment). Return to site for two subsequent years following completion of project for follow up treatment, as necessary. This mitigation will prevent perennial pea from being dispersed along haul routes to areas with fresh ground disturbance caused by timber harvest.

During the season before the ground disturbing phase of project implementation begins, and during seasons in which the project is being implemented, hand pull *Arctium minus* (common burdock) where it grows in dense patches along FS Road 42 (unless NEPA analyis allows for alternative treatment. This mitigation will prevent common burdock from being dispersed along haul routes to areas with fresh ground disturbance caused by timber harvest.

During the season before the ground disturbing phase of project implementation begins, and during seasons in which the project is being implemented, hand treat scotch broom site located near Unit 29. Plants shall be hand pulled (unless NEPA analysis allows for alternative treatment). Return to site for two subsequent years following completion of project for follow up treatment, as necessary.

Units 6, 8, 25, 48, and 49 would be located a minimum of 100 feet away from Forest Road 42. The objective is to avoid the appearance of disturbance (stumps and slash) as viewed by motorists on Road 42. This also negates the need LRMP required mitigation to soften the appearance of disturbance.

Tread on the Summit Springs Trail #173 will be re-established to standard (e.g. 24 inch width) if inadvertently disturbed by logging operations in Units 43 or 44 to maintain the integrity of the Summit Springs Trail.

Following log yarding in Units 43 and 44, logging slash within 10 feet on either side of Summit Springs Trail #173 will be pulled back and dispersed. Slash pull back would also occur on this trail between Units 43 and 44 (Divot Unit 28). The objective is to maintain this system trail by removing slash impeding trail travel and reducing the appearance of disturbance.

Protect known warty jumping slug sites by designating a no-cut buffer with a 100-foot radius (approx 0.7 acre) around each site.

Protect all existing snags and down logs that are remnants of the previous stands to the extent possible by falling trees away from them and routing skid trails around them. If snags must be felled for safety reasons, leave the resulting log in place.

Ensure that existing remnant snags and logs are not affected by slash treatments. Ensure that these features are not incorporated into slash piles, or burned when burning slash.

Log hauling will be permitted only Monday through Friday, except Federal holidays.

Trail 173 will be posted as closed during logging and post sale fire activities. Sign as closed at the trailead and on either end of the units..

Table 2. Required mitigation measures by resource area. These measures apply to all action alternatives, unless otherwise specified.

Soils	
S.1	Areas where rutting exceeds 6 inches in depth for a length of ten feet or more will be prohibited from further ground-based equipment passes to prevent detrimental rutting of the soil.
S.2	Temporary roads and landings will be subsoiled to a depth of 20 inches. Subsoiling and grass seeding must be done immediately following logging and create an uneven, rough surface without furrows. Proposed alternative methods to subsoiling must be approved by a qualified specialist in consultation with the sale administrator and documented.
S.3	Vehicular access to areas that have previously been subsoiled and/or seeded will be prohibited to prevent these areas from being re-compacted and to allow vegetation to develop.
S.4	Burning will be limited to periods when soil and duff moisture is sufficient to prevent consumption of more than ten percent of the duff layer.
S.5	If partial suspension logging systems gouge the surface greater than 12 inches deep for a length of 10 feet or more, rehabilitate with cross drains (if ground is sloping) and erosion seeding or pile slash over them.
S.6	Available logging debris and slash would be scattered onto the subsoiled roads and landings to maintain organic matter levels.
S.7	Machine piling of slash would be accomplished with as light a track machine as is practicable, equipped with a swivel grapple. Piling would begin at the end of the unit furthermost from the access road and work its way back, operating on top of the slash.
S.8	Subsequent to burning machine piled slash, soil under piles greater than 100 square feet would be seeded, but not fertilized.
S.9	Where designated by the timber sale contract administrator, impacted areas of skyline yarding would be waterbarred, seeded and fertilized.
Hydrol	ogy
H.1	No equipment will be allowed in Riparian Reserves. The objective of this measure is to minimize disturbance of ground cover, soils and vegetation within Riparian Reserves. This measure applies to all units.
H.2	To minimize the amount of sediment delivered to streams along the haul route and from reconstructed and obliterated roads, dispose of soils 100 feet from any perennial or intermittent stream at a location approved by the Sale Administrator. In addition, place sediment barriers (straw bales, slash filter windrow and/or sediment fence) in ditchlines along the haul route or in areas where the ground is disturbed and sediment has the potential for delivery to streams. Sediment filters should be left in place where possible to naturally degrade. If non-biodegradable filters are used, precautions should be followed to minimize transport of trapped sediment material during removal, including the following: a) work during the dry season, and/or b) relocate captured sediment to a stable location.
H.3	All road maintenance and reconstruction activities, and all timber hauling would occur in the June through September period to minimize sediment production and delivery to the aquatic system. This applies to all roads in the project area. The September 30 end date for haul may be waived if conditions are good and haul-related sediment production is not increased as a result of fall precipitation levels. Conditions typically meriting a waiver include: 1) daily precipitation levels remaining below the average daily maximum precipitation for the June through September period (1.05 inches as measured at the Carson National Fish Hatchery); and 2) two-week cumulative total precipitation of less than the average maximum two-week precipitation levels during the June through September period.

	complete, cross drains and grade breaks would be installed in all temporary roads, skid trails, landings and skyline corridors.
Botany	
B.1	When culvert replacement sites are identified during 2006, botanical surveys of these sites will be conducted. If sites for <i>Corydalis aquae-gelidae</i> or any other Sensitive or Survey and Manage species requiring management of known sites are located during these surveys, additional project design criteria designed to ensure site persistence and viability will be incorporated into the project.
Invasive	e Weeds
I.1	To prevent the introduction of noxious weeds into the project area, all heavy equipment, or other off- road equipment used in the project is to be cleaned to remove soil, seeds, vegetative matter or other debris that could contain seeds. Cleaning should be done before entering National Forest Lands, and when equipment moves from or between project sites or areas known to be infested into other areas, infested or otherwise.
1.2	Use weed-free straw and mulch for all projects, conducted or authorized by the Forest Service, on National Forest System Lands. If State certified straw and/or mulch is not available, individual Forests should require sources certified to be weed free using the North American Weed Fee Forage Program standards or a similar certification process. Mulch species shall preferably be from native seed sources.
1.3	Inspect active gravel, fill, sand stockpiles, quarry sites, and borrow material for invasive plants before use and transport. Treat or require treatment of infested sources before any use of pit material. Use only gravel, fill, sand, and rock that is judged to be weed free by District or Forest weed specialists.
Wildlife	
W.1	After thinning, girdle or top an average of one tree per acre that is at least 17 inches diameter to create snags, and fell one tree per acre to create logs. Create the snags in small groups to simulate disease or insect mortality patterns.

Attachment 2

Substantive Comments to the Tee Timber Sale EA and Forest Service Responses

SJB.1 Comment: The cumulative effects analysis is inadequate. "If it is the case that the GPTF.16 Tee Timber Sale will have cumulative effects, regardless of how minor (unless completely mitigated), then the Forest Service must clearly indicate as such, and prepare an environmental impact statement analyzing these effects."

Response: The EA acknowledges that there will be cumulative effects of this project and other activities in the watershed in terms of sediment production and introduction (EA pg 63). The EA also acknowledges that because mass wasting is not common in the watershed, the road systems offer the greatest potential for sediment production and delivery (EA pg 55, 63). The EA points out that erosion rates from road systems are highly correlated with the timing of construction activities and increased traffic (EA pg 55, 58, 60, 61). Once construction activities or increased traffic rates decline, sediment levels decline (EA pg 61). Also, due to the small grain-size of eroded material from the roads, the material is often quickly transported downstream (EA pg 63).

The EA characterizes background sediment production rates from roads in the watershed (EA, pg 55, Table 3.16), and attempts to quantify erosion rates from roads planned for use in the Tee Timber Sale (EA pg 61). Because the Tee Timber Sale is temporally separate and distinct from other timber sales or known road construction activities, the cumulative sediment effects of the Tee Timber Sale are taken to be the sum of the direct and indirect effects of the Tee Timber Sale as described on pgs 61-62 of the EA, and the background road-related erosion described on page 55 of the EA. Any temporary increase in background erosion rates (such as might occur under the Divot Timber Sale) would presumably occur during the time of haul and road-related activities for that sale, and would be reduced to near background levels by the time Tee was implemented (estimated to be at least one or two years after Divot is completed). To minimize effects of road construction and hauling on sediment production under the Tee Timber Sale, all construction and haul is required to occur during the dry season (EA pg 22, 58, 60).

SJB.2 **Comment:** "...in a watershed heavily impacted from high road densities, the Forest Service must conclusively demonstrate that it *must* build more roads in order to implement the Tee Timber Sale."

Response: The EA acknowledges the environmental effects of roads. The IDT, during the initial design stages of the proposed action (Alternative A) recommended and utilized the helicopter logging system to extract logs from the majority of treatment units that were not currently accessed by an existing road. The final design utilizes helicopter logging to facilitate log removal on 67 percent of the unit acreage. The majority of the remaining units under Alternative A are accessed by existing roads, except for 3 harvest units and 2 helicopter log landing sites. The helicopter landing sites (and the roads leading to them) are necessary to be able to helicopter log a major portion of this sale. Temporary road construction to access the other units for ground-based logging is more cost effective than helicopter logging (EA pg 126). The Responsible Official considered the environmental impacts of temporary roads and has decided to drop the construction of 4,200 feet of temporary road within Unit 47 that would have impacted Riparian Reserves and

instead utilize a helicopter logging system. The remaining two temporary roads are designed outside of Riparian Reserves.

SJB.3 GPTF.3 CNW.1 **Comment:** "The Forest Service ... decided to utilize a uniform thinning prescription for the Tee Timber Sale. The EA does not explain why this decision was made, or why variable density was not selected." (Refer also to CNW recommendations).

Response: The proposed thinning prescription will not result in a uniform spacing of trees. Of the original 1,358 acres proposed for thinning last fall, 293 acres were deferred from treatment. These acres are scattered throughout most of the units and will not be thinned. In addition, several units contain survey/manage sites which will be protected/buffered and not thinned. Buffers will also be placed around known heritage sites. These areas, in effect, are "skips" in a variable density prescription. "Gaps", another part of variable density, were discouraged because of potential effects to the Spotted Owl's dispersal habitat (EA pg 99-100). Thus no gaps, within the treatment units, are proposed this entry. However, log landing sites and new temporary road prisms will produce gap effects. The residual stands will have variability, but will be somewhat limited this entry due to dispersal habitat concerns for the spotted owl.

SJB.4 GPTF.3 CNW.2 **Comment:** "I would request that, as we discussed during our Tee field trip (as well as our recent Kalama field trip), the Forest Service implement a much more conservative harvest prescription at least in Riparian Reserves. A 60% canopy retention scheme in Riparian Reserves would be appropriate, based on field conditions. In particular, where the survey and manage species *corydalis aquaegelidae* is found, the Forest Service should retain a canopy closure of 70-90% as required for this species survival. EA, 83. A lower canopy retention of 50% in surround matrix allocations might be appropriate, *so long as variable density prescriptions are employed.*"

Response: In those portions of the Riparian Reserves proposed for thinning, 40 to 50% canopy cover retention was proposed this entry, to: 1) accelerate the growth of the residual trees in the reserves; 2) provide favorable environmental conditions that would be conducive for conifer reforestation survival and growth. Table 3.27 (EA pg 78), shows the residual tree diameter growth based on the percent of canopy closure left after treatment. The IDT felt that the 40 to 50% canopy retention during this entry best met Aquatic Conservation Strategy Objective 1 by creating a residual stand that will result in larger trees in the riparian reserves. A 60% canopy closure, after treatment would provide a very short-term growth benefit to the trees. As the canopies again begin to close, inter-tree competition would again develop and tree growth would slow.

All known sites of Corydalis aquae-gelidae potentially affected by project activities are protected by buffers developed based on the Survey and Manage Management Recommendations and Conservation Assessment for this species (EA pg 87)

SJB.5 GPTF.9 **Comment:** "The EA states that there are several 'non-surveyable' survey and manage fungi that may exist in the planning area. EA, 85, 82. What does the Forest Service mean by calling these species 'non-surveyable'?"

Response: Under Survey and Manage, pre-disturbance surveys for Category B species are not considered practical. This is also true for some Category D species. Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer and Other Mitigating Measures Standards and

Guidelines FSEIS (2001), Vol. 1, pg 47: Surveys prior to habitat- disturbing activities are considered not practical if any of these factors listed on page 47 do not apply. Many fungi, which do not produce identifiable structures on a predictable timeline (i.e. may not fruit for many years), are considered to be survey impractical species, as are some minute, cryptic lichen species, such as pin lichens. When some Survey and Manage botanical species were added to the Regional Forester's Sensitive Species list in 2004, there was recognition that some of these species were considered "surveys not practical" species. In the Tee Botanical Resource Report and the EA, such species are referred to as "non-surveyable" in the context of limited duration surveys prior to habitat disturbing activities. Guidelines for effects analyses for these species were subsequently developed by the FS Regional Office, and were utilized during preparation of the effects analysis in the Tee Botanical Resource Report. Guidelines are available at: http://www.or.blm.gov/ISSSP/Conservation_Planning-and-Tools.htm

SJB.6 GPTF.2 GPTF.10 **Comment:** "It is unclear from the EA whether all identified survey and manage sites will be protected. The EA states that several species will be buffered (and indicates the buffer width), EA, 84, but also is silent on other species, EA, 102. Please clarify whether all species will be buffered, and if so, the buffer width. If all species will not be buffered, please explain why not."

Response: Unit marking was coordinated with both wildlife and botany personnel to ensure Survey and Manage buffer compliance. Boundaries were changed and known sites within the units were protected. All known sites for Survey and Manage botanical species are protected by Project Design Features (EA Appendix A). Buffer sizes are specified in the Botanical Resource Report and EA (pg 87-89).

All known warty jumping slug sites are protected by a buffer of at least 100 feet (EA Appendix A). Larch Mountain salamander sites have been buffered to prevent disturbance to the more open habitats that they inhabit in the watershed. Malone's jumping slug sites within the units will not be buffered, but the species will be maintained within the watershed in designated High Priority Sites and reserves according to the Management Recommendations for this species (EA pg 106).

SJB.7 **Comment:** "...the Forest Service does not address how (or, whether) the Tee Timber Sale will contribute to the introduction, establishment, and spread of noxious weeds."

Response: The Tee Botanical Resource Report (BRR) incorporates a Weed Risk Analysis, which discusses the potential of the project to exacerbate existing weed infestations, or introduce new infestations into the project area. Standards for preventing and managing invasive plants are incorporated as project design features in the BRR and EA, in compliance with the Pacific Northwest Region Invasive Plant Program EIS ROD for Preventing and Managing Invasive Plants (USDA 2005). Noxious weed treatment would during the years of project implementation, and following project completion. Implementation of recommended mitigations is at the discretion of the line officer. If approved by the line officer, a KV Plan will be prepared to conduct annual noxious weed treatment during the years of project implementation, including follow up treatments following project completion. KV funding will be contingent upon excess receipts from the sale of the timber sale. Noxious weed treatment will be a priority project for funding. Refer to BRR pg 32-38 and EA Appendix A.

SJB.8 Comment: "The Tee Timber Sale EA does not commit to retaining as many

GPTF.4 remaining legacy features as possible in harvest units."

Response: Appendix A of the EA lists Project Design Criteria that addresses protection of snags and logs. More specific language from the Wildlife BE has been added.

SJB.9 Comment: "While the Forest Service is proposing to use mitigation measures to address potential compaction problems in units 5 and 40, there seems little reason to risk permanent impairment of soil productivity in these sensitive areas. I would recommend that the Forest Service require winter logging over snow for these two ground-based units, rather than using ripping or other soil mitigation measures."

Response: Winter logging over snow was discussed. The trade-offs were considered unacceptable. It would result in the extension of the logging season into the rainy portion of the year. Although these units would contain a snow buffer, lower elevation haul roads would be saturated. Unacceptable road damage and siltation may occur (EA pg 63, 64).

SJB.10 Comment: "[The EA] states that 'no road construction or timber harvest activities are planned in the areas described above in any of the alternatives—this includes areas in Units 4 and 29,' EA, 34. Please clarify what activity will or will not be permitted in these units. I recommend that the Forest Service either designate these unstable areas in units 4 and 29 as Riparian Reserves, or drop them from consideration altogether."

Response: Unit 4: More than 40% of the canopy cover will remain, and so provide stability to the soil. There were no signs of mass movement or landslides on the ground, and the shrub cover was relatively dense. Therefore, the risk is considered to be moderate to low that soils will move in 3-8 years. Unit 29: The area mapped as potentially unstable will not be disturbed.

GPTF.1 **Comment:** "Given the continued rapid decline of spotted owls in southwestern Washington and the paucity of suitable owl NRF & foraging habitat in the project area watersheds, there is no justification for reducing existing spotted owl foraging habitat to dispersal or non-suitable habitat."

Response: The wildlife analysis for the Tee Timber Sale determined that project is not likely to adversely affect spotted owls. The U.S. Fish and Wildlife Service agreed with this determination in their concurrence letter dated 5/25/06. This determination is based on several factors including: the general lack of suitable nesting habitat in the watershed and analysis area, which means that there is a low likelihood that resident territorial spotted owls would be present in the landscape; the available foraging habitat in the analysis area would be reduced by only one percentage point, from 15% to 14% of the area; the effect would likely be relatively short-term (10 to 15 years); and the anticipated long-term benefits of accelerated tree growth and stimulation of the forest understory would outweigh the short-term effects. The U.S. Fish and Wildlife Service considers the effects of the proposed thinning on spotted owls to be discountable.

GPTF.5 Comment: "... the Forest Service [should] not construct any temporary roads as part of this timber sale. ...the proposed road in unit 47 does not make sense considering the ecological and economic tradeoffs. If 20 acres of the 46 acre unit are cable logged, an extra \$37,000 in revenue will be generated, assuming 12mbf/acre is harvested and the cost differential between cable and helicopter

logging is \$134 (EA p 121). Road construction and decommissioning costs will be around \$21,500 for 4200' of road given the cost assumptions in the EA (p. 121). This figure does not account for invasive species treatments and other rehab costs. Given the ecological costs of building the road through what appears to be a patch of structurally complex older forest, building this road does not make sense."

Response: Agree – With proposed helicopter landings nearby, the IDT recommended dropping 4,200 feet of temporary road within this unit and instead utilize a helicopter logging system to remove the logs.

GPTF.6 **Comment:** "We would like to see roads with a high aquatic impact be prioritized for decommissioning as part of this sale. These roads could include 4107000 (the 4107507 could be a part of this decommissioning), 4109610, and 3800000, all of which are recommended for decommissioning in the Forest Service's roads analysis."

Response: There are a number of reasons why some of the roads proposed for decommissioning in the Watershed Analysis and Water Quality Restoration Plan were not included in the proposed action for Tee Timber Sale.

- 1) The amount of road decommissioning proposed is within the expected KV return from the timber sale.
- 2) The roads that are proposed for decommissioning were prioritized based on their potential for resource damage (steep, mid-slope roads that are prone to failure and that are redundant to area access or roads that encourage intrusion into the Silver Star Roadless Area).
- 3) Roads that are in matrix land allocations and that may be needed for future haul or fire suppression are not proposed for decommissioning because it is generally not cost effective nor environmentally preferable to decommission and re-commission roads.
- 4) FR 3800000 is outside of the sale area and KV funds could not be used for this purpose.
- 5) Sensitive cultural resource sites were identified along some roads that would require extensive data recovery before road decommissioning actions could be undertaken. Road decommissioning for these roads would require additional analysis and a separate decision.
- GPTF.11 **Comment:** "Alternative B in the draft EA drops units 6, 8, and 25 from the project without giving a clear reason as to why these units as opposed to other units are dropped, other than to "address cumulative watershed affects" (see EA, pg 12). If units are to be dropped, the Task Force recommends that the Forest Service select units based clearly identified ecological reasons. For example, the Task Force recommends considering dropping some units with high densities of legacy snags such as units 5, 21, 44, and 47, or units 40 and 44 due to the large presence of spotted owl foraging habitat, or units 5 and 40 due to their mature age, existing high productivity, soil compaction concerns, and existing tree species diversity."

Response: Units 6 and 8 were dropped due to the amount of Riparian Reserve and proximity to a fish bearing stream. Unit 25 was dropped to reduce the amount of thinning near Slide Creek and the East Fork Lewis River. Legacy snag retention, spotted owl foraging habitat, stand age, and soil compaction issues are addressed through mitigation and the application of Project Design Criteria.

GPTF.12 **Comment:** "Is replanting with native forage species a part of this timber sale and if not, why not?"

Response: The Botanical Resource Report includes the following project design feature: Native plant materials are the first choice in revegetation for restoration and rehabilitation where timely natural regeneration of the native plant community is not likely to occur. Non-native, non-invasive plant species may be used in any of the following situations: 1) when needed in emergency conditions to protect basic resource values (e.g., soil stability, water quality and to help prevent the establishment of invasive species), 2) as an interim, non-persistent measure designed to aid in the re-establishment of native plants, 3) if native plant materials are not available, or 4) in permanently altered plant communities. Under no circumstances will non-native invasive plant species be used for revegetation. (Standard 13). Contact South Zone botanist for appropriate seeding and site preparation prescription. When seed is used it should be either certified noxious weed free or from Forest Service native seed supplies (BRR pg 36).

GPTF.13 **Comment:** "Are we correct to assume that fertilizer application is therefore not part of the timber sale?"

Response: The proposed aerial fertilization application was dropped from this analysis and decision.

GPTF.14 **Comment:** "The [EA] states that the Forest Service was unable to conduct stand exams in all of the proposed units due to time and logistical limitations (see EA, pg 72). This raises the question as to whether the Forest Service has adequately surveyed the units to ensure that no old growth forests or live remnant old growth trees exist in the units. Please clarify whether the Forest Service has adequately surveyed the units to determine whether there are any live old growth trees present."

Response: The purpose and need for the Tee Timber Sale focuses on restoring and accelerating the timber growth and yield of even-aged stands of dense, 70 to 100 year old timber stands. The Yacolt fires were mostly stand replacement fires; however there may be an occasional, remnant live old growth tree, within the proposed treatment areas. The thinning prescription is designed to retain these trees.

GPTF.15 **Comment:** "The Task Force recommends that slash only be piled and burned near the roads and not yarded. Slash should be placed across skid trails to minimize compaction and left behind in the unit after harvest to provide down woody debris."

Response: The proposed slash treatment plan requires machine and/or handpiling along segments of roadsides that will remain open to the public after logging. The remainder of the units will have the logging slash lopped and scattered within the unit. The timber sale contract will specify pre-designated skid trail and landings, which will be approved by the Forest Service. Past monitoring of this mitigation measure has shown that approximately seven percent of the area is impacted by the skidding system. The Forest Plan does not require a treatment mitigation unless the impacted area exceeds twenty percent. Slash will not be placed across the skid trails to minimize compaction, however small amounts of slash are deposited on the trails during whole tree skidding and will provide some protection. Once the log landing begin to fill with logging slash, often times the purchaser will re-distribute the slash back into the unit, on the skid trails, and skid over top the slash.

GPTF.17 **Comment:** "...the Forest Service [should] conduct post-project monitoring to assess how the Tee Timber Sale impacts the forest ecosystem in these stands."

Response: The amount of post sale monitoring of the Tee Timber Sale will be contingent upon funding. This sale is proposed for an interdisciplinary review during Forest Plan monitoring once harvest is completed. Within reforested areas (Riparian Reserves) first and third year seedling survival /growth data will be collected. Funding for invasive weed monitoring will be recommended.

CNW.4 **Comment:** "While dry season hauling is recommended in the aquatics portion of the EA, it should be made explicit in the decision document and followed in the field."

Response: Dry season hauling is described in mitigation measure H.3 (EA pg 25) which is common to all action alternatives and is a required mitigation, as defined in the Decision Notice. This mitigation will become a part of the timber sale contract.

CNW.5 Comment: "[Is] seeding with grass is necessary everywhere? The option of covering sites with slash and allowing them to reseed naturally should be explored. Grassy openings have some wildlife value, but it can take several decades for native plants to colonize and create a functional forest gap."

Response: The timber sale contract will include erosion prevention and control plan to apply native grass seed only to skid trails, temporary roads, and landings. The reminder of the area within the units will be allowed to reseed naturally, underneath the retained slash. Grass has advantages that seem to outweigh the advantages of piling slash such as more complete coverage (generally); faster incorporation of soil organic matter; provides competition for invasive plants.

CNW.6 **Comment:** "Overall, the majority of the net revenue generated from this project should be devoted to reducing the long term aquatic impacts of the road system in the watershed."

Response: Roads recommended for decommissioning will be eligible for funding with appropriated funds, KV funds, or other restoration funding and will be given high priority for funding. KV funding, from the Tee Timber Sale, could be used if a proposed road decommission is within the designated sale area boundary and funds are available.

CNW.7 Comment: "The EA states that tops will be yarded in some units. Given the history of hot fires that likely volatilized much of the nitrogen in the soils and organic soil layers are thin, limbs and tops should be scattered on the forest floor. As stated in the EA, slash should also be used to cover skid trails, landings, and decommissioned temp roads. The huge burn piles on the landings from the Divot sale should be avoided."

Response: In Alternative A, 67 percent of the harvested acres will be helicopter logged. No tops and very few limbs will be flown out of these units to the log landings. The skyline units would also be the same with very few limbs and tops reaching the landings. The tractor units could be whole tree yarded, but most of the limbs during the yarding would break off and remain with the unit. The IDT understands the concerns of the existing thin organic layer within the Tee Planning Area and the recommended slash treatment plan was designed to both add

slash/nutrients to the organic layer and mitigate hazardous fuels concerns.

Johnson.1 **Comment:** There is potential for unsafe conditions: recreational use of the same roads as for timber hauling.

Response: To improve public safety, the following Project Design Criteria have been added and will become part of the timber sale contract:

- a) log hauling will be permitted only Monday through Friday, except Federal holidays and
- b) b) Trail 173 will be closed during the period of logging operations.